

**DEPARTMENTS OF TRANSPORTATION, TREASURY AND GENERAL GOVERNMENT, AND RELATED AGENCIES APPROPRIATIONS FOR FISCAL YEAR 2005**

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**THURSDAY, APRIL 22, 2004**

U.S. SENATE,  
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,  
*Washington, DC.*

The subcommittee met at 10:02 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Richard C. Shelby (chairman) presiding.

Present: Senators Shelby, Stevens, Murray, and Dorgan.

**DEPARTMENT OF TRANSPORTATION**

**FEDERAL AVIATION ADMINISTRATION**

**STATEMENT OF MARION C. BLAKEY, ADMINISTRATOR**

Senator SHELBY. The subcommittee will come to order. Today we welcome Ms. Marion Blakey, the Administrator of the Federal Aviation Administration, and Mr. Ken Mead, the Inspector General of the Department of Transportation. I thank you both for being here this morning. I look forward to our discussion.

Madam Administrator, your agency and the aviation industry are to be commended for operating the safest aviation system in the world. The 3-year average for fatal commercial accidents is at an all-time low.

Obviously no mission is more important than the Federal Aviation Administration and we should strive to improve upon this impressive safety record. I look forward to hearing from our witnesses what additional steps can be taken to improve the safety of our airways.

The FAA and the aviation industry face other challenges, as well. Our current fiscal constraints require us to make choices between priorities and programs. We are at a critical juncture in the modernization and operation of our air traffic control system. After almost a decade of vigorously growing budgets, we are faced this year with a budget request and a budget environment that would seem to indicate that tough choices will have to be made at the FAA.

Mr. Mead's written statement points out that FAA has not been accustomed to operating within a budget-constrained environment and that changing the organizational culture to accept budget constraints will be a challenge. Yet when I look at the FAA budget request I am struck that the choices made in this budget request are

remarkably similar to the choices of the past. The agency's operations account grows by 5 percent while funding for facilities and new air traffic control equipment is squeezed. When other Federal agencies are facing 1.5 percent growth, I find it astonishing that a request for 5 percent growth is viewed as constrained.

Madam Administrator, you are to be commended again for your commitment to slow the growth rate in the FAA's operational costs and in your efforts at personnel reform. Clearly we have a long way to go to bring the FAA's operational cost growth into line with the budget realities that we are likely to face for the next several years. While you have all the legal authority to implement virtually any reform you can imagine, true personnel reform is elusive and remains exceptionally difficult at the FAA.

#### PAY PERFORMANCE

Your effort to link pay and performance is a step in the right direction. I note that you have had mixed success in tying pay raises to meeting performance goals. It is ironic that the controllers did not participate in this linkage between raises and performances last year, even though one of the three organizational goals that FAA missed was air traffic control operational errors.

Administrator Blakey, tying pay to performance is appropriate, I believe, and overdue. While your action last year was only a step on a path toward linking pay and performance, I commend you for taking this necessary first step. I look forward to hearing what further steps you plan to make.

I also want to mention your efforts to restructure air traffic services and research and acquisition offices into a performance-based organization called the Air Traffic Organization. If this structure is properly implemented, it will instill personal accountability throughout the FAA. On the other hand, if the ATO is implemented incorrectly, it will only add another layer of bureaucratic structure to an already dysfunctional organization.

#### PROBLEMS WITH MODERNIZATION

I believe that we must improve FAA's workforce productivity if we are to achieve any type of meaningful budgetary savings. A major contributor to improving productivity should come through making the right investments in modernization of the National Airspace System. Yet when I review the facilities and equipment budget, I am disappointed that this is where the cuts to the FAA budget have been taken. I am concerned that the lion's share of the remaining facilities and equipment funding is poured into the same money pits that consumes a disproportionate amount of our capital funding, including the Wide Area Augmentation System (WAAS) and Advanced Technologies and Oceanic Procedures (ATOP).

Further, I am increasingly concerned with the En Route Automation Modernization procurement to replace the aging Host system. The funding profile for ERAM is unrealistically aggressive; the program structure is unnecessarily complex; and the procurement strategy virtually guarantees substantial cost growth, schedule slippage, and questionable outcomes. I am interested in hearing from the Inspector General, his suggestions for minimizing the risk associated with this program.

We may be coming to the realization that the FAA is not capable of developing realistic cost estimates and schedules for major acquisition and development programs. We may also need to determine what steps to take to protect the taxpayer from what the Inspector General characterizes as historical “cost growth, schedule slips, and shortfalls in performance.”

What concerns me most about the statement is the implication that cost growth, schedule slippage, and performance shortfalls are expected and seem to have become part of the FAA culture. The FAA’s failure to cost-effectively modernize and redesign the National Airspace System is only matched in spending and failure by the IRS’s on-going failed attempts to modernize its computer system.

#### FLIGHT DELAYS

The Bureau of Transportation Statistics recently published its monthly analysis of airline on-time statistics and causes of flight delays. The 6-month analysis shows that almost half of flight delays are caused by insufficient infrastructure or failures of the National Airspace System itself. I believe this data underscores the primary issue facing the FAA in this budget request: are we making the right decisions to address constraints in the system, enhance safety, and improve efficiency, or are we failing to question our assumptions and merely following the same programs, procurements and pitfalls that the FAA has slavishly adhered to in prior budgets? It is an important question to ask and an even more important question to honestly answer. I hope we can get some of these answers here today.

Senator Murray.

#### STATEMENT OF SENATOR PATTY MURRAY

Senator MURRAY. Thank you, Mr. Chairman. I am glad you have called this meeting this morning to focus specifically on the needs and challenges facing the Federal Aviation Administration.

The President’s budget for fiscal year 2005 proposes to effectively freeze overall funding for the Transportation Department at the level of \$58.7 billion. However, within that proposed freeze are selected increases and corresponding cuts. The largest single cut of any agency within the Transportation Department is roughly the \$400 million that President Bush wants to cut from the FAA’s efforts to modernize our air traffic control system. Frankly, I was dismayed when I learned of the President’s planned retrenchment in aviation investment.

As a long-standing member of this subcommittee, I know well that there have been several problems that have beset the FAA’s efforts to modernize the equipment that keeps the National Airspace System operating each day. As the Inspector General will tell us this morning, certain programs continue to encounter significant cost overruns and schedule delays.

But in my mind, the solution to these problems is not the wholesale disinvestment that is proposed by the President. While a lot of attention has been focused on the \$400 million cut proposed for 2005, a little known fact is that President Bush’s multi-year budget anticipates even further cuts will be made in the FAA’s procure-

ment budget in the future. For 2006, the Bush Administration intends to cut air traffic control modernization by an additional \$61 million. Taken together, under the President's proposal total funding for air traffic control modernization over the 4-year period covered by the Vision-100 Aviation Authorization Bill that the President just signed a few months ago would be more than \$2.3 billion less than the level authorized in that bill.

What is even more perplexing is that the Bush budget proposes that modernization funding stay almost \$2 billion below the level that President Bush himself proposed in his own Aviation Reauthorization Bill. Finally, under the Bush budget, funding for aviation modernization would be almost \$1.3 billion lower than the level we would achieve if we just froze modernization funding at the current level.

This is truly harsh treatment. It seems no sooner did the President sign the Vision-100 bill than he turned his back on it. His wholesale retrenchment will mean that the flying public will have to wait even longer to see the woefully outdated Air Traffic Control System brought up to modern standards.

My principal concern with the President's decision to disinvest in aviation is what it means for the future of aviation and America's leadership in aviation. After leading the world in aviation for its first 100 years, I have to wonder whether the President is now creating an opportunity for Europeans or others to control the next 100 years. When you look at many of the modernization projects that have been eliminated from the budget to accommodate the President's proposed cuts, many of them were designed to bring the cutting edge of technology into our air traffic control system to make our aviation system safer and more efficient.

Just last week I had the opportunity of visiting the Air Traffic Management enterprise at the Boeing Company in my home State of Washington. They are making great strides in developing plans for the next generation, satellite-based air traffic control regime. These are the kinds of initiatives in which we must continue to invest if we are to stay ahead of our foreign competitors and lead the way in aviation. Leadership means having a plan that addresses the future, not just a plan to survive day to day with inadequate staff and outdated equipment.

One case in point is the situation we find ourselves in with our air traffic controllers. Today the number of air traffic controllers at our 24 en route centers is 747 controllers—10 percent less than the level called for under the FAA's own staffing standard. Some of these facilities are currently staffed as much as 30 percent below the level called for under the FAA's staffing standard.

The Inspector General will testify to us that the FAA is going to need to take great care in planning for what is expected to be a wave of controller retirements potentially bringing the number of available air traffic controllers for these facilities to an even lower level. The FAA needs the kind of resources to implement a plan that is focused on the future to ensure that as air traffic continues to grow there will be a steady stream of fully trained controllers to manage our air space so that our system can continue to be the safest in the world.

## AIRCRAFT MAINTENANCE

Another case in point is the area of aircraft maintenance. The Inspector General will testify that the FAA has real deficiencies in its inspection oversight of maintenance activities that were formerly executed by the air carriers themselves but are now commonly contracted out to third parties. On January 8 of last year, a US Airways Express plane crashed while taking off at Charlotte, North Carolina, resulting in 21 fatalities. The NTSB's investigation of this crash revealed that the cause was partially related to defective maintenance by a third-party contractor.

We need to have an FAA that is sufficiently focused on the future so that its inspectors are ahead of the industry trends, not playing catch-up.

Mr. Chairman, we have an obligation to keep this agency focused on the future, even if the President's budget wants to focus them solely on survival from day-to-day. I hope this subcommittee will not allow our Nation to lose its leadership in aviation and undermine the progress we have made in ensuring that our aviation system remains the safest in the world.

Thank you very much, Mr. Chairman.

Senator SHELBY. Senator Dorgan.

## STATEMENT OF SENATOR BYRON L. DORGAN

Senator DORGAN. Mr. Chairman, thank you. I am sorry I was delayed. My understanding is that we have not yet had the statement by the witnesses; is that correct?

Senator SHELBY. We have not. This is the opening statements of Senators.

Senator DORGAN. I will be very brief. I do have some questions for the FAA Administrator.

This is obviously a big job. We are threatened in this country with the prospect of terrorists that want to kill innocent Americans and we know that they have used airplanes to do that. The FAA has had a big job even notwithstanding terrorism but add terrorism to the issue and it is significant.

I think the airline industry has had plenty of struggles in recent years and our country and our economy depends on a commercial airline network that works and that is safe and provides reliable transportation. We have gone through a series of things over many years of crowding and delays and passenger issues and then the terrorist attacks and the shutdown of that industry, so I think Administrator Blakey has her plate full and I appreciate the work she does.

I do want to say this. I am concerned again about the recommendation in the President's budget to cut funding for essential air services by half, more than half, in fact. I think it is a serious mistake. I remain concerned about the prospect of contracting out or privatization of certain air traffic control functions, and I will talk about that with the Administrator.

Mr. Mead, thank you for the continuing work you do. You have been, I think, very important to the work that we have done on the Commerce Committee on many issues and important to the work

in the Appropriations Committee, so thank you very much for being here, as well.

I will then hear the testimony and then ask questions, Mr. Chairman.

PREPARED STATEMENT OF SENATOR RICHARD J. DURBIN

Senator SHELBY. Thank you, Senator Dorgan. Senator Durbin has submitted a prepared statement which will also be included in the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR RICHARD J. DURBIN

Chairman Shelby, Senator Murray, thank you for holding this important hearing today on the fiscal year 2005 budget for the Federal Aviation Administration (FAA).

I'd like to begin by welcoming FAA Administrator Marion Blakey and Inspector General Ken Mead back to the committee for today's hearing. I look forward to your testimony.

This morning, I'd like to briefly touch on a few issues of importance to my home State of Illinois.

Administrator Blakey, I want to thank you and the Federal Aviation Administration (FAA) for your continuing support of the Chicago O'Hare modernization project. I'm told the City of Chicago and the FAA are working well together and that a project office has been opened and a time line established. As you know, this project remains a high priority for me and it is vitally important to our national aviation system.

It's my understanding that the FAA will begin the Environmental Impact Statement (EIS) process in February 2005 and will endeavor to have a signed EIS Record of Decision by September 2005. I hope this project will remain on schedule. I encourage both the FAA and the City of Chicago to keep working together to develop the roadmap for this project. The positive impact that O'Hare modernization will have on the region and the national aviation system is simply too important to delay.

The O'Hare modernization project is the long-term solution to chronic congestion and delays at the airport. However, in the interim we need to pursue operational changes—better and more efficient technology and procedures as well as flight operations.

Yesterday, Secretary Mineta announced an additional 2.5 percent voluntary flight reduction by both American and United Airlines at Chicago O'Hare during peak travel times. This follows a 5 percent voluntary flight reduction in January, designed to help relieve aviation congestion and flight delays at the "World's Busiest Airport." I was pleased to join you and the Secretary in pushing for a temporary, voluntary reduction of flights during the peak hours at O'Hare.

However, I want to ensure that these flight reductions do not disproportionately affect smaller communities, like Downstate Illinois. I look forward to reviewing the data on this initiative and working with you and the airlines.

Finally, I would like to ask you to look into two Chicago Airport System projects that were included in the fiscal year 2004 Omnibus Appropriations conference report (Transportation-Treasury title), at my request. First, \$4 million for various improvements at Midway Airport related to capacity expansion. And \$1.5 million for CAT II/III instrumentation for Runways 27L and 27R at O'Hare. It is my understanding that this funding has not yet been released by the FAA. I hope you can help resolve any outstanding issues on these projects within the FAA in the near future.

Thank you, Mr. Chairman.

Senator SHELBY. Both of your written statements will be made part of the hearing record in their entirety. You may proceed as you wish. We will start with you, Ms. Blakey.

STATEMENT OF MARION C. BLAKEY

Ms. BLAKEY. Thank you, Chairman Shelby. And I do appreciate, Senator Murray, all of the leadership that the Senate is exercising in this area, and I do want to thank you, Senator Dorgan, for all

of your attention to aviation. We have had some good conversations, and it has been very helpful from my standpoint.

It is a pleasure to appear before you today to represent the men and the women of the Federal Aviation Administration. I am also proud to be following Secretary Mineta, who I know appeared before you last month.

Let me take a moment if I could, also, to recognize our Inspector General. Ken Mead and his staff have worked very closely with us over the last year and we do appreciate their work to help us address a number of difficult issues. We also appreciate their commitment to helping us improve the way we do business.

Last year I testified before this committee for the first time as the Administrator of the FAA. I told you then that I had witnessed the best the agency has to offer, operating the best aviation system in the world safely and efficiently; major advances in modernization, capacity and, of course, safety. But I also told you that the FAA has not achieved its full potential. It had not become the performance-based organization that it could be, that Congress intended it to be, and I said we could do better.

#### FLIGHT PLAN

I am happy to say that we are doing better, Mr. Chairman. In the past year we have made changes that will fundamentally alter the way the agency operates. First, we began tracking goals, programs and spending through our Flight Plan, the agency's blueprint for action through 2008. For the first time in FAA history, our business plan is tied directly to our budget. The Flight Plan is making the FAA more businesslike, more performance-driven, more customer-centered, and more accountable.

And for the first time, each FAA organization now has its own individual business plan that is linked to the Flight Plan, costed out, and built into a performance tracking system that our senior management regularly reviews. In fact, we get together, all of us, once a month to look at this to see how we are doing—are we hitting our numbers or not? And we post this on the FAA website so everyone can see the status of our reviews.

The chart next to me shows you the kind of information that we are making publicly available. It is a very simple, very accessible, red, yellow, and green system. It shows how we are doing on things like decreasing runway incursions, increasing our airport arrival efficiency rate, and bringing in our critical acquisitions on schedule and on budget, as I understand this committee has concern about.

We list all 30 targets in the Flight Plan and you can see the progress we are making on them. For example, if you are on the website and you click on that top red bar there, what you are going to see is our general aviation accident data. And, as you can see, we are currently in danger of missing our target in this area. At the same time, we are well on our way to meeting our goal on another one of the bars up there, of reducing the most serious operational errors by 15 percent, thanks to the very hard work of our controllers. You can see the details of it again on this kind of chart. We are providing this information to anyone who needs it.

## AIR TRAFFIC ORGANIZATION

Just this past year we launched a new Air Traffic Organization to eliminate bureaucratic stovepipes and provide more cost-efficient services for our customers. We hired our Chief Operating Officer from the private sector. This had been a major goal from a congressional standpoint and certainly one we shared. I would therefore like to introduce Russ Chew, our new COO, behind us. Russ is really building the tactical engine that is going to help us become more bottom-line-focused.

## CHIEF FINANCIAL OFFICER (CFO)

Just weeks ago we hired a new Chief Financial Officer (CFO) and I would like to introduce Ramesh Punwani, who is the former CFO of Travelocity, TWA, and Pan Am, so we have wonderful experience that we are drawing on.

Across the agency we are implementing the tools that will allow us to operate more like a business. We have cost accounting in two of our lines of business and several support organizations. By the end of this fiscal year the remaining lines of businesses for the FAA will have cost accounting up and running.

## COST ACCOUNTING

Now as an example of cost accounting, I think you will find this interesting. The chart next to me shows a breakdown of the FAA's hourly cost of providing en route services to individual aircraft. We have not been able to do this before. It is currently \$139 per hour. With this data, the FAA can now understand the cost of providing services and identify better ways to drive those costs down.

On the other chart we have broken down the cost by facilities, again en route services, and while there are very legitimate differences between facilities, you can learn a lot by looking at those that are operating at a lower cost per flight hour. So again this illustrates what we are trying to do.

Mr. Chairman, cost control is a priority, and I assure you we are working on reducing the increases in those operating costs that you talked about.

## AIR TRAFFIC MOU'S

Now in response to concerns regarding the air traffic control memoranda of understanding, we have implemented a strict new internal process of reviewing all labor agreements. We are also working to improve our performance-based pay systems by strengthening our employees' incentives to perform.

## PAY-FOR-PERFORMANCE

Within the last year we increased the percentage of our employees under pay-for-performance from 35 percent of the workforce to 75 percent of the workforce. Our sick leave, workers comp, overtime costs, yes, the FAA's costs are among the highest in government and we are aggressively working to manage those costs.



## SAFETY

While we are striving to control our costs and operate more like a business, safety always remains the FAA's top priority. I am pleased to announce that the Nation's commercial fatal accident rate is at an all-time low—.022 fatal accidents per 100,000 departures. This chart, I think, really tells an amazing story. Admittedly, .022 is a difficult number to comprehend, so what does it mean? I thought one of the best examples of this was articulated by Dr. Arnold Barnett, who is Professor of Management Science at MIT. He puts it this way. Pick a random flight every day. You will fly 21,000 years before you are involved with a fatal crash.

This year we made good progress in bringing new technology on line that will improve safety. Just take, for example, required navigation performance or RNP, a revolutionary approach that will move the United States from a ground-based navigation system to one located within the aircraft itself. Saves time, avoids delays for the traveling public, improves safety, and improves the environment. What is not to like? And because the equipment is already located on board many of our aircraft, it saves the airlines, the government, and the traveling public money.

## REPAIR STATIONS

In addition to improving safety through modernization, we are sharpening our focus on airline maintenance. Again that was a focus of Senator Murray's discussion this morning. We are looking very hard at repair stations, both here and abroad. We have enhanced our new oversight programs for stations that perform outsourced maintenance work. In January, in fact, we implemented sweeping revisions to repair station rules. It gives us more surveillance authority, tougher standards for contract maintenance, and mandates FAA-approved training programs for these workers.

## CAPACITY

Finally let me turn to capacity. Our budget requests \$3.9 billion to expand capacity and improve mobility within the Nation's aviation system. As we return to full capacity, we are taking immediate and direct steps to avert a repeat of the delay-ridden summer of 2000. We remember it all too well. We forecast a return to pre-9/11 traffic levels by 2006.

Less than a month ago we convened a Growth Without Gridlock Conference that Russ Chew and his team put together that was a first-of-its-kind meeting of industry, decision-makers and government to see what we could do. Together, this group agreed to new procedures, including express lanes. Those essentially give us a way of streamlining our structure in the sky. We also agreed to a policy that would impose minor delays at strategic airports occasionally in order to avert massive delays across the Nation.

So I am confident that these kinds of efforts are going to lay an important foundation to greater capacity without diminished efficiency.

## PREPARED STATEMENT

So in closing, let me just emphasize we are working hard to manage the FAA. We are changing the agency structure, with a major shift to customer service and performance-focused organization.

So with that, thank you, and I look forward to your questions.  
[The statement follows:]

## PREPARED STATEMENT OF MARION C. BLAKEY

Mr. Chairman, Senator Murray, and the distinguished members of this committee, thank you for the opportunity to be here this afternoon. I'm pleased to be following Secretary Mineta's appearance before you last month and proud to be here representing the men and women of the Federal Aviation Administration, which operates an aviation system that is second to none in safety, complexity, and system efficiency.

Your message to the FAA last year was both clear and direct: The FAA needs to operate more like a bottom-line business. We need to pay greater attention to delivering high performance and cost-efficient programs, and we need to show where we can save and redirect resources to higher priorities.

These are very tough economic times for aviation, and we must exercise care and caution with the taxpayer's dollar. In the past year, the FAA has implemented several changes that will streamline our operations, much in the same way a private sector corporation would respond to a changing economy. From the way we deploy equipment to the way we compensate our employees, we are working to make better use of the monies appropriated to us. While we still have a ways to go, in the past year, we achieved 75 percent of our performance goals, including on-time arrival, exposure to noise, airport daily arrival capacity, and airport arrival efficiency rate. The agency also is on track to meet our performance goal of an 80 percent reduction in fatal commercial accidents by 2008. The 3-year average for fatal commercial accidents is at an all-time low.

## THE FAA'S FLIGHT PLAN, 2004–2008

Step one for the agency was to put in place a strategy for setting goals and achieving them. We call it our "Flight Plan," modeled after the specific routes a pilot follows from takeoff to touchdown. It is the FAA's business plan—a blueprint for action through 2008. What's more, for the first time in the history of the FAA, the plan is tied directly to our budget. The leadership of the Secretary of Transportation has made this possible. Mr. Mineta has provided the Department of Transportation and this agency with a strategic direction that has translated into results for the taxpayer.

The Flight Plan commits the FAA to four broad goals: increased safety, greater capacity, increased U.S. international leadership, and organizational excellence. The plan will make the FAA more business-like, more performance-based, more customer-centered, and more accountable. It is dynamic, adaptable, and cost-driven.

For the first time, as part of our Flight Plan, each FAA organization now has its own individual business plan. Each of these plans is linked to the Flight Plan, costed out, and tied to the budget. Our business plan goals have been built into a performance-based tracking system that we post to the FAA web site. It lists each of the goals, performance targets, who's responsible, and the status of each. Using this data, the senior management team conducts a monthly half-day review of agency performance. This effort represents a first for the FAA and is proving itself to be time well spent and money well invested. When associated with other cost and performance data, this information lets us see, clearly and precisely, the true cost of a program. All the FAA lines of business are also implementing cost accounting tools and practices.

## SAFETY

Secretary Mineta has made it clear: there is no effort more important to the Department of Transportation than improving safety, and our budget reflects that commitment. Out of a total request of \$13.97 billion, almost two-thirds—about \$8.8 billion—is dedicated to improving or maintaining the safety of aviation. The Flight Plan lays out an aggressive safety agenda. It supports further progress on reducing the commercial and general aviation fatal accident rate and on reducing the numbers of runway incursions, operational errors, and HAZMAT incidents. It also establishes five new safety goals: reducing accidents in Alaska; decreasing cabin injuries

from turbulence; preventing commercial space launch accidents; completing implementation of a safety management system; and developing a single, composite safety index. The overarching goal is to measure and achieve the lowest possible accident rate, while constantly enhancing safety.

Already this year, we have made headway by bringing new technology online. We are implementing a revolutionary new technology: required navigational performance (RNP). Pilots and controllers use “RNP” in areas where terrain can make it difficult or impossible to locate traditional navigational aids, such as an instrument landing system. In Juneau, Alaska, an unforgiving landscape and brutal weather conditions make arrivals difficult. RNP enables Alaska Airlines to make smoother arrivals. According to Alaska Airlines, this saves them \$3 million per year. I have had the privilege of flying an RNP approach into Juneau firsthand. Controllers and pilots agree: RNP works.

From a technological standpoint, RNP combines the precision information from satellite, airborne, and ground-based navigational equipment into new procedures that enable the pilot to touch down at a precise point on the runway. Its use allows for lower minima, enabling pilots to land at airports that would previously have been unavailable in bad weather. Much like computer software, there is no RNP to hold in your hands, but its benefits are without question. RNP enhances safety. It saves time and avoids delays for the traveling public. This will help improve the environment. Because the equipment is already onboard the aircraft, additional savings will be realized as well.

We remain equally committed to reducing the number of accidents overall, not just those where fatalities or injuries occur. We successfully installed the Airport Movement Area Safety System at 34 airports. ASDE-X is a similar success story. Designed to increase airport safety by enhancing controller awareness, this surveillance system detects potential conflicts on runways and taxiways. It depicts aircraft and vehicle position with location information overlaid on a color map showing the area. The first operational site was commissioned last fall. Almost two dozen will be delivered by the end of 2005.

Our budget request includes \$243 million to continue the Enroute Automation Modernization, or ERAM. This is a critical program that replaces obsolete hardware and software of the main host computer system that is the backbone of en route operations. This level of funding is vital to accomplishing our baseline schedule. I’m happy to report that ERAM is progressing well. For example, one of the precursors to deploying ERAM just went operational on February 25, more than one month ahead of schedule. Another major milestone—the first major software deliverable—was completed on time in December. However, we do not underestimate the magnitude of this undertaking. But we have the right team, the right approach, and a single-minded focus to bring this program in on time and within budget.

In February, FAA alerted the airlines and aircraft manufacturers to the possibility of an equipment change based on the FAA’s consideration of new regulations, whose object would be to reduce fuel tank explosions. Years before, prospects seemed dim for a cost-effective solution. Experts said it couldn’t be done, but an FAA researcher devised an inexpensive process to prevent fuel tank explosions. The process replaces the oxygen inside the empty fuel tank with nitrogen, an inert gas that will not explode. Statistics and research show that this, combined with our efforts to remove ignition sources, will pretty much close the book on fuel tank explosions for the U.S. fleet. Boeing already is moving ahead to implement this technology aboard its airliners, although the FAA is several months away from making a decision on proposing new regulation.

We’re also successful in deploying equipment to decrease the effects of bad weather on aviation. Controllers, managers, and airlines use our integrated terminal weather system—ITWS—for real-time situational weather information that not only reduces weather-induced delays and diversions, but also avoids wind shear. We already have installed this system at Atlanta, Miami, Kansas City, Houston, St. Louis, Chicago and Washington, DC. ITWS is currently being rebaselined; we will provide you with our fiscal year 2005 plans for deploying additional systems soon.

In addition, we are sharpening our focus on airline maintenance. The FAA relies on almost 3,400 inspectors, 20 percent more than were onboard at the time of the ValuJet accident, to ensure airlines meet safety obligations. Over the last few years, we trained our inspectors to work smarter in response to industry changes. We continue to emphasize risk assessment and trend analysis to identify lapses. This approach targets our surveillance to where it produces the greatest safety benefit. Staying out in front of the cause—prevention—is still the best way to stop an accident.

We’re focusing on repair stations, both here and abroad. We’re enhancing new oversight programs for stations that perform “outsourced” maintenance work. In

January, we implemented sweeping revisions to repair station rules. This gives us more surveillance authority, tougher standards for contract maintenance, and mandates FAA-approved training programs for workers.

#### CAPACITY

While safety is our primary concern, we're also committed to expanding capacity throughout the aviation system—both in the air and on the ground. The budget requests \$3.9 billion to expand capacity and improve mobility within the Nation's aviation system. This request supports expansion of capacity on the ground with new runways, as well as the continued deployment of new technologies for increasing the efficiency of the existing system.

We forecast a return to pre-9/11 traffic levels by 2006, and we are taking steps to be ready. 2003 was a banner year for new runways—at Houston, Miami, Denver, and Orlando—four of our busiest airports. In each case, we reduced congestion problems at the specific location, as well as providing relief to the overall system. We are well aware that new runways are important at smaller airports, too. That's why our reauthorization legislation gives small airports more flexibility for capital improvements.

Our Flight Plan commits us to improving overall capacity at the Nation's top 35 airports by 30 percent, over a 10-year period; redesigning the airspace of eight major metropolitan areas (New York, Philadelphia, Washington/Baltimore, Boston, San Francisco, Chicago, Atlanta, and Los Angeles Basin); addressing environmental issues; improving traffic efficiencies; and reducing airline delays. As you know, if any of our major airports are suffering from congestion, the whole system can be dramatically affected. Airport expansion and enhancements are extremely challenging. But when it comes to finding a solution, nothing can be ruled out—even building new airports.

As we increase capacity, we must ensure environmental responsibility. The budget requests \$571.6 million to support environmental stewardship for noise mitigation, fuel efficiency enhancements, and a comprehensive approach to addressing both noise and emissions.

We continue to have success with the traffic management advisor—a system that is designed to optimize the flow of high-altitude aircraft into busy airports. It's operational at eight sites and has increased the capacity at these airports by as much as 5 percent. We plan to install this software at Chicago next year with the expectation that it will increase capacity there by at least 2 percent.

The Standard Terminal Automation Replacement System (STARS) provides controllers with standardized color displays and supporting processors to display radar targets for control of the terminal airspace. It replaces several generations of the existing terminal automation systems. STARS' most significant feature is its open architecture, enabling it to expand and adapt to new functional requirements, and changing system configurations due to airspace changes and runway modifications. Its unique fusion tracking allows it to receive inputs from 16 locations to depict aircraft location more precisely. It also represents a substantive increase in security and redundancy over the existing terminal systems. STARS will be the backbone for the next generation of safety and capacity tools. STARS is operational at 19 FAA TRACON facilities and 13 DOD air traffic control facilities. Our fiscal year 2005 plan for STARS will be provided to you shortly, as we are currently undergoing a baseline review.

The Flight Plan charts our course to 2008. Beyond that, the Operational Evolution Plan, our current 10-year rolling plan, sets out the aviation community's strategy to increase capacity by 31 percent by 2010.

Looking further into the future, the aviation community needs to develop a shared vision for aviation. That's why we launched a joint planning and development office—called the JPDO. It is formulating a plan for the evolution of aviation between now and 2025. The joint planning and development office is housed in the FAA and comprised of members from the Department of Transportation (DOT), NASA, the White House Office of Science and Technology Policy, and the Departments of Commerce, Defense, and Homeland Security. For the first time, we will put in place a unified national plan to meet the aviation needs of U.S. businesses, consumers, and the military.

Aviation is critical to the growth of the U.S. economy. This work will lay an important foundation for the future. For example, some 51 million international visitors come to the United States every year, making a contribution of more than \$100 billion to the economy. Since the tourism and aerospace industries generate about 10 percent of the U.S. gross domestic product, we're preparing for both an increasing number of domestic users and the opportunities of an ever-expanding global sky.

## INTERNATIONAL LEADERSHIP AND GLOBAL HARMONIZATION

The third goal in our Flight Plan is international leadership. The United States must lead aviation into the second century of flight, as it did in the first. Today, the FAA has operational responsibility for approximately half of the world's air traffic, certifies nearly three-quarters of the world's large jet aircraft, and provides assistance on improving aviation systems to more than 100 countries. However, we must become even more globally focused to ensure that U.S. citizens can travel safely around the world, while being a catalyst for the smooth flow of safety and capacity enhancing technology around the world. The budget requests \$45.2 million to support international leadership and global connectivity.

Several weeks ago, I returned from a trip to Beijing, Hong Kong, and Tokyo. Chinese aviation is thriving. The United States remains China's largest export market, taking over one-third of China's exports. According to forecasts, China, over the next 20 years, will buy more transport category aircraft than any other country. By 2020, China's air traffic operations will be second only to our own. In terms of sheer numbers, China will be an important component of the expanding global aviation system. Our goal is to work with Chinese aviation officials to implement a system that is safe, efficient, and interoperable with Western technology. The FAA already is laying the groundwork to assist China's aviation system in supporting the 2008 Olympic games.

It is clear that the FAA needs to have a central role in advancing the international leadership of the United States in aviation, and not just in Asia. The numbers and the activity point to the need for a globally regulated sky, and we are working to shape that destiny. I have had the unique privilege of signing bilateral aviation safety agreements with key aviation partners in Asia and Latin America, literally within weeks of each other. These agreements are good for all of us—for passengers, for government, and for the aviation industry.

## ORGANIZATIONAL EXCELLENCE

The fourth goal is at the heart of the entire plan: to fulfill our mission, the FAA must become a world-class organization. The people of the FAA are the key to achieving this goal. We are committed to finding and eliminating barriers to equity and opportunity. We believe that fairness and diversity fortify our strength. Furthermore, we must give our people the tools and resources they need to overcome the challenges we face and to become more accountable and cost efficient. In turn, our employee compensation and salary increases should be performance-based, allowing the agency to pay for results and reward success.

In simple terms, our objectives are: to have stronger FAA leadership, to meet our organizational goals, to control costs while delivering quality customer service, and to make decisions based on reliable data. The budget requests \$428 million for organizational excellence initiatives.

We can't be more accountable, cost efficient, and customer service oriented unless we continue to change our way of doing business. The FAA launched a new Air Traffic Organization (ATO) late last year. Our previous organizational structure followed typical bureaucratic stovepipes that often stymied progress. To overcome this, we hired a chief operating officer who comes from the private sector, where success is predicated on efficient organizational structures. This group, known as the ATO, is taking its first steps toward becoming a bottom-line-focused, results-driven service organization. One thing is certain: the air traffic organization is the tactical engine that will help us achieve the near-term goals of our Flight Plan and, eventually, lead the FAA to a new way of doing business.

This is a real change in the agency's operating philosophy. We are organizing around what we produce for our customers. We have 10 operating service units that will be responsible for not only operations, but also for implementing new technology and capabilities within their own business unit. The ATO is making changes across the board. We recently hired a new vice president of safety. This position provides day-to-day focus on safety from within the air traffic organization. We also have created an office located outside the new organization to provide independent air traffic safety oversight.

I am very excited about the possibilities that this new organization holds for us in streamlining our operations and being more accountable and productive. I will keep the committee apprised of its activities and progress.

Like our counterparts in the private sector, we are determining how best to utilize our human capital in the years to come. Our people are our greatest resource, and the safety of the NAS, our greatest priority. We have several challenges on the way to achieving organizational excellence, one of which is the impending controller retirements. As required by law, we have initiated a rulemaking to consider waiver

requests by individual controllers who want to work beyond the current mandatory retirement age of 56. This rulemaking has potentially significant personnel, budgetary, and other issues, so although we have accelerated the process, it is not yet completed.

In addition, we are looking for other ways to become more efficient. Specifically, we are investigating ways to right-size our facilities. We are working to make our training programs more efficient in order to reduce the time it takes to train new controllers. Additional steps may need to be taken, and I will keep the committee apprised of our actions.

I'm also pleased to note that FAA employees are, overall, adapting well to the changes that are being made in the FAA and aviation, in general. Our latest employee attitude survey shows a 71 percent job satisfaction approval rating. That's an increase of 3 percent.

My initial impression is that while these survey numbers are moving in the right direction, we still have a lot of work to do. As in past surveys, employee ratings in several key areas are high, but in other key categories, such as trust in upper management, accountability of the organization, and communications, the numbers are not where they should be. At this time, each line of business and staff office is working to identify action plans that we must undertake to further improve our scores in these areas. We are also looking at administering the survey more frequently, as well as capitalizing on the success of the private sector employee survey instruments and action planning used by some of our external aviation partners.

#### COST CONTROL

One of our major objectives in the Flight Plan is cost control. As you have requested, we are working on reducing our operating costs, which have increased by 22 percent over the last 5 years. We are taking the following steps to be more cost efficient:

- In response to your concerns regarding the proliferation of memoranda of understandings (MOU's), last year, we implemented a strict new internal process for reviewing all labor agreements. We also renegotiated a number of costly pay rules and MOU's with the National Air Traffic Controllers Association (NATCA), as part of the controller's contract extension. We now conduct an assessment of the budget impact and legal implications of labor side agreements before we sign. We also established an automated database for memoranda of understanding that will allow us to track and analyze those agreements.
- We are committed to negotiating pay-for-performance with our unions until 100 percent of our workforce is under the system, and we are actively working to control the growth of our labor costs. Currently, 75 percent of the workforce is under a pay-for-performance system. We have a very well compensated work force—and deservedly so. They strive every day to achieve the highest level of safety and service for the American people. At the same time, we know we cannot sustain the growth in our operating costs, and we are addressing it. We recently negotiated an extension of the NATCA contract that links a portion of pay increases to controller performance. Discussions with the Professional Airways Systems Specialists (PASS) are continuing. The NATCA multi-unit, a group of administrative employees represented by NATCA independent of air traffic controllers, has been at impasse for some time.
- Although FAA's Office of Worker's Compensation Program (OWCP) bill has increased at a rate well below that of the rest of government over the last several years, at a cost of \$90 million, this program continues to be a major issue for us. We have undertaken several initiatives that have begun to reduce costs, and we plan to devote additional resources to the program. A major OWCP issue facing not only the FAA, but also the entire Federal Government is the right of beneficiaries to stay on OWCP rolls well beyond normal retirement age. Forty-two percent of former FAA employees on the OWCP rolls are 60 years of age or older. Even more significantly, these individuals account for almost 70 percent of the FAA's chargeback costs to the Department of Labor (DOL), totaling well over \$60 million!
- The agency's transition to a new financial management system, DELPHI, remains under way. Bringing the system online has proved to be a challenge. Slowly but steadily, the agency is working to reduce the number of outstanding vouchers and overdue vendor payments that were delayed during the transition to the new system. Importantly, the agency received a clean audit opinion on our financial statements for the third consecutive year.
- We also are working diligently to implement the administration's call for cost-effective business operations. An FAA study of automated flight service stations

is being conducted to compare the cost of performing the function by Federal employees to the cost of contracting it out. The study, initiated under the A-76 program, is designed to ensure that automated flight service stations operate in the most cost-effective manner without compromising safety or service. Our goal is to get the best deal for the taxpayer, while focusing on the services required for safe and efficient flight. The taxpayer stands to realize substantial savings because of reduced annual operating costs, which stand at \$502 million in fiscal year 2003. The FAA enters the process with an open mind and a commitment to make sure the process is fair.

- The FAA is consolidating many of our personnel and accounting functions to streamline the numbers of offices performing duplicative functions. Much of our accounting operation will be centrally located in Oklahoma City.
- The agency has implemented cost accounting in two lines of business and several support organizations. We will implement cost accounting in the remaining lines of business later this year. The Office of the Inspector General has raised several concerns with our labor distribution system, CRU-X, and we are refining it to account more accurately for the distribution of labor costs. The Inspector General raised justifiable concerns about an “automatic sign off” feature in CRU-X that would, in essence, punch an individual’s time card without actually being certain of when he or she stopped working. The Inspector General also raised concerns about the ability for the system to track all types of official time—such as breaks or when conducting official union business.

#### CONCLUSION

In closing, let me emphasize that we are taking decisive steps to manage the agency, its programs, and its expenditures. We are changing the agency’s structure with a major shift to a performance-based organization, making hard, tough choices with our funding. We are implementing cost accounting. We’re operating more like a business. We will continue to work on increasing the capacity of the system as it returns to pre-9/11 levels. With that, I thank you for your time and welcome the opportunity to discuss these issues in greater detail.

Senator SHELBY. Thank you.  
Mr. Mead.

#### OFFICE OF THE INSPECTOR GENERAL

#### STATEMENT OF KEN MEAD, INSPECTOR GENERAL

Mr. MEAD. Thank you, Mr. Chairman, Senator.

I want to point out first that I think the feeling is mutual with regard to the IG relationship with the FAA. The management at FAA is clearly, unambiguously improving, in my opinion, and the rigor of cost control, which is important in these times, is clearly evident.

And as for you, I appreciate the kind words. It almost seems to me like yesterday that I can recall testifying before you. I can recall some of the exact questions and observations you made just 2 weeks after 9/11, first in that extraordinary joint House and Senate appropriations hearings and then the Senate Secure Conference facility. It is etched in my mind.

The CBO has estimated that the deficit is going to be about \$477 billion this year. In 2001, FAA estimated that the trust fund revenues next year would be about \$14 billion. That number has come down. It is now projected to be about \$11 billion. So their budget request of \$14 billion is about \$3 billion more than the trust fund is going to bring in.

As the Administrator has said, a major focus for FAA this coming year must be the control of costs. And as you noted, Senator Shelby, in our statement we say that historically FAA is not used to living in this type of environment.

I would like to make just a number of points here but the first I would like to highlight is that FAA has got to be in a position for rebounding air traffic. Domestic traffic levels still fall short of the peak experienced in 2000, but there is no question that traffic is rebounding.

#### PASSENGER ENPLANEMENTS

Some data points as a frame of reference here. In February 2004, the number of passenger enplanements is down 12 percent from February of 2000. That represents a 5 percent growth over enplanements last year. And I think this is an interesting statistic, that in 13 of the 31 largest airports, including some of those that experienced serious delays in 2000, the number of scheduled flights in March 2004 is actually exceeding the number of scheduled flights in March of 2000. But at 11 of those 13 airports, the number of available seats scheduled is still lagging behind the number offered in March 2000. One reason that the operations in the air traffic control system can be up but the number of passengers still down is the huge growth in the use of regional jets. Since this time in 2000, the number of regional jet flights has increased by 134 percent. That is a pretty astonishing figure.

Airports that bear watching include Chicago O'Hare. As you could tell from the papers this morning, the Secretary and the FAA took some additional actions yesterday. I would watch Atlanta, and the three New York metropolitan airports. At those five airports, arrival delays during the first 2 months of 2004 ranged from between 20 and 35 percent of scheduled flights and the delays were generally 50 minutes or more, which is not dissimilar from where we were in 2000.

Another watch item I would like to put on your RADAR screen is Dulles Airport. The launch of Independence Air by former United Airlines regional carrier Atlantic Coastal Airlines will increase Dulles traffic this summer to historically high levels. You can probably expect at least a 50 percent increase in traffic there. That is going to place additional demands on the air traffic control system, to say nothing of the already taxed security checkpoints there.

#### SAFETY

Safety. It has already been mentioned that the January 2003 Air Midwest crash in Charlotte was the only fatal commercial accident in the past 2 years. I do think that record is almost remarkable. I can report that FAA has made progress again this year in reducing runway incursions. Those are potential collisions on the ground. Actually it is 3 years running that those numbers are down, but at 324 this past year, that number is still much too high.

Operational errors where controllers allow planes to come too close together in the air, that remains a significant safety risk. They continue to increase—over 1,000 of them in 2003, with an average of about one very serious error every 7 days. So those must come down.

On maintenance, there has been, as Senator Murray pointed out, a gravitation of maintenance from in-house to out-sourced. There are domestic repair stations and there are foreign repair stations. We did issue a report last year on it that contained a series of rec-



ommendations. The FAA has agreed with them all and is proceeding to implement them.

The budget. Operating costs are mostly salaries and at \$7.8 billion, those costs are the largest portions of the FAA's budget. They continue to increase but not as markedly as they had been in these last several years and I attribute that to Administrator Blakey and her team.

#### MOU'S

We reported last year that FAA and NATCA had entered into sidebar agreements called memoranda of understanding. Sometimes FAA management did not even know about these and they had no real inventory of them and there were a number that were costly and rather wasteful.

Just one example. One memorandum of understanding allowed controllers that were getting transferred to receive their pay increase by as much as \$45,000 before moving and sometimes they would get that money a year ahead of time. Well, this past year FAA and the controllers union have rescinded or modified a large number of those memoranda of understanding. There are a couple that I think still need attention but there has been a lot of progress this year.

Getting big reductions in FAA's operating costs is tough, Mr. Chairman, and that is because FAA has a very high salary base and much of that salary base is covered by contract.

#### CONTROLLER RETIREMENTS

A cost driver this subcommittee needs to be aware of, though, is a bubble of pending controller retirements. You have in front of you two hand-outs and I would like to focus on the first one. The hand-out that we provided indicates that FAA's estimate is that about 7,000 controllers will leave the agency over the next decade. As you can see from the chart, it begins to hit big-time in 2006 and increases steadily from then on up through 2012.

Now whether FAA is going to have to replace all these controllers on a one-for-one basis is going to depend on a variety of factors like the number of facilities and how many people they need at each facility and initiatives that FAA undertakes in its hiring and training process.

Well, we just completed an audit of FAA's process for replacing and training controllers. I think it is with FAA for comment and we will be issuing it soon. We see some opportunities here.

First, I do not think FAA has a good handle on where the vacancies are going to occur and when you are talking about hiring people in these numbers, you really have to know where they occur, because you have 300 facilities in the system. And there is also a need for getting some solid, good estimates of where they are going to occur and how many and when.

When we visited FAA facilities we found that they were all over the map in how they were counting. While they all had estimates of attrition, they differed. For example, one only counted mandatory retirements. That is when you get to age 56. Another used only transfers and excluded retirements and another included all

types of attrition, so they need to calculate their estimates on a common basis.

#### OJT TRAINING

We also found that there were some huge differences in how FAA facilities handle on-the-job training of new controllers. They do not keep data on such things as the time and cost required to complete OJT and we tried to calculate it at some sample facilities and what we found was pretty astonishing. The average time to train a new controller is about 3 years but we found in some instances it would go up to almost 7 years.

#### COST ACCOUNTING

Cost accounting. Administrator Blakey is correct that they have made progress at the agency on cost accounting but I am really disappointed with the lack of progress in fielding a labor distribution system plan for air traffic control. Until you have that in place, it is going to be almost a crap shoot to figure out where you are going to need controllers and when. So I am hoping that we see some progress this next year on that.

#### CAPITAL ACCOUNT

I will go to the capital account that both the chairman and Senator Murray referred to. Last year we did analyze 20 projects and found schedule slips of up to 7 years. Fourteen projects experienced cost growth of over \$4.3 billion. That number is an interesting number because it exceeds by more than 100 percent the annual appropriation for this account. FAA is aware of this. We have seen some very positive signs as the Administrator and her team are focused on addressing problems. FAA has a lot on its plate with the existing acquisitions, plus they're starting some new ones.

I would like to speak to the half-billion-dollar reduction for a moment. It is not fair to say that the projects that were cut lack merit but it is fair to say that the projects that were cut did face some fundamental issues, like not having a realistic cost estimate. And I do not mean just off by a little bit; I mean by in some cases \$100 million. In other cases there were serious miscalculations about the benefits.

#### ACQUISITION PROGRAM

There are two things on the overall acquisition program that FAA needs to do. The first is too many expensive projects do not have reliable cost and schedule estimates, and I am talking about huge swings. I know FAA is working on that but until you get some reliable cost and schedule baselines you are going to have a very difficult time figuring out what the game plan is going to be for the future.

And second, stay away from these long-term cost-plus contracts. By long-term I am not talking about just a couple of years. I am saying sometimes a decade-long contract where you enter into it and you say it is cost-plus, which is where the contractor basically can bill the government and it is open-ended. ERAM, as you men-

tioned, Senator Shelby, which is the brain for controlling the high altitude air traffic, is one such new system.

#### AIRPORTS

Airports. I would like to close on a couple of points on airports. First is revenue diversion. Revenue diversion is illegal in most cases. Congress put in some caveats and grandfather clauses and so forth but overall, revenue diversion is illegal and what revenues diversion is is that money that is going to the airport, that the airport generates, is not supposed to go to the city or the State, except to pay for reimbursement for the services that are provided. We are finding too much revenue diversion out there. I think FAA could step up its efforts to provide some oversight.

#### PREPARED STATEMENT

Second is you have had some big plus-ups in the airport account. It has gone from \$1.5 billion, I think, to almost \$3.5 billion. In addition, you authorized an increase in the passenger facility charge, increased that to about \$4.50. That is yielding about \$2 billion a year. Those funds are directed by law toward airport-related projects, such as new runways. However, FAA also incurs costs to support many airport projects. Well, you are going to have to get money from somewhere to provide the nav aids, the air traffic equipment, and things of that nature that have to support those capacity enhancements. I see this as a looming issue as to where you are going to get the money to pay for those, particularly as FAA's capital account gets squeezed more and more, because that is the account where the money has historically come from.

Thank you, Mr. Chairman.

[The statement follows:]

#### PREPARED STATEMENT OF KEN MEAD

We appreciate the opportunity to testify today as the subcommittee begins deliberations on the fiscal year 2005 appropriations for the Federal Aviation Administration (FAA). This year, we are facing an austere budgetary environment, one that will likely continue for at least the next several years. The Congressional Budget Office estimates that the Federal deficit will be \$477 billion this year.

Within this context, FAA must also be positioned for a rebound in air traffic. Domestic traffic levels still fall short of the peaks experienced in 2000, but there is no question that traffic is rebounding. In February 2004, the number of revenue passenger enplanements (35.1 million) was down 12 percent from February 2000, but this represents a 5 percent growth over enplanements in February 2003 (33.3 million).

While systemwide operations in February 2004 were slightly down from February 2000, the story is very different on an airport-by-airport basis. In 13 of the 31 largest airports, including some of those that experienced serious delays in 2000, the number of scheduled flights in March 2004 actually exceeded the number of scheduled flights in March 2000. However, in 11 of those 13 airports the number of available seats scheduled still lagged behind the number of available seats offered in March 2000. This is an indication, at least in part, of how network carriers are using regional jets in the place of narrow-body jets to connect traffic to the network hubs.

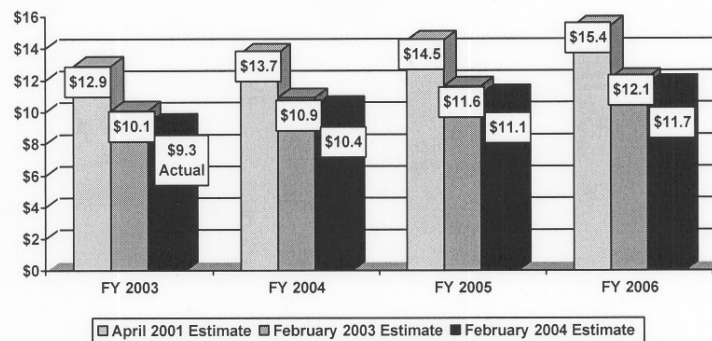
It is unlikely that the situation will reach the level of widespread system failures we experienced in the summer of 2000, but it is possible that some airports could experience disruptions in service. Airports that bear watching include Chicago O'Hare, Atlanta, and the three New York metropolitan airports. At these five airports, arrival delays during the first 2 months of 2004 ranged between 20 and 35 percent of scheduled flights.

The FAA and the Department have been working with the industry to identify potential solutions to delays that might occur this summer such as creating high-altitude express lanes and voluntary schedule reductions. At Chicago O'Hare, arrival delays during March 2004 represented a 74 percent increase over delays in the same period in 2003 but down from triple digit increases during the period between November and January.

One situation that bears watching, in particular, is the expected service growth at Washington's Dulles airport. In June, when Independence Air is launched by former regional carrier Atlantic Coast Airlines as a new low-cost carrier, traffic at Dulles will increase significantly. Some estimates put that increase at over 50 percent by this summer. In addition to airside congestion, there are concerns with airport terminal services, including the resources needed to process a significantly increased number of passengers through security checkpoints.

While air traffic levels continue to show improvement from the sharp declines of 2001, there still remains a substantial decline in projected Aviation Trust Fund revenues. In 2001, FAA estimated that Trust Fund revenues in 2005 would be about \$14.5 billion. That estimate has now been reduced to \$11.1 billion.<sup>1</sup> FAA's fiscal year 2005 budget request of \$14 billion exceeds those revenues by nearly \$3 billion.

**Aviation Trust Fund: Comparison of Trust Fund Receipts**  
\$ in billions



Clearly, a major focus for FAA this coming year, and for some time to come, must be controlling costs. FAA has not been accustomed to operating within this type of environment, and changing the organizational culture to reflect that focus will be a challenge. This past year, we have seen positive signs of leadership and commitment on the part of Administrator Blakey and her staff to address FAA's costs. For instance, there has been notable progress this past year in reining in FAA's unabated cost growth in its operations account. Progress is also being made toward restructuring the Air Traffic Organization into a performance-based organization. However, much more remains to be done to bring FAA's costs under control. Actions such as:

- developing realistic cost and schedule baselines for major acquisitions,
  - avoiding long-term cost-plus contracts,
  - improving contract oversight,
  - implementing a cost accounting and labor distribution system, and
  - identifying ways to increase workforce productivity
- will be key to effectively manage the Agency's budget, and this will be the focus of our testimony today.

#### SAFETY

It is important to note that the U.S. aviation industry continues to be the safest in the world. The January 2003 Air Midwest crash in Charlotte was the only fatal commercial accident in the United States in the past 2 years. This past year, FAA

<sup>1</sup> Even though air traffic operations are rebounding, Aviation Trust Fund revenues have not returned to previous levels partially because of lower enplanements, lower air fares, and more point-to-point service operations, all of which affect the amount of tax revenue collected.

has made progress in reducing runway incursions (potential collisions on the ground), but operational errors (when controllers allow planes to come too close together in the air) continue to increase. In fiscal year 2003, runway incursions decreased 4 percent to 324, while operational errors increased 12 percent to 1,186, with an average of 3 operational errors each day and 1 serious error (those rated as high risk) every 7 days.

Additionally, a significant challenge for FAA will be to adjust its safety oversight to emerging trends in the aviation industry, such as outsourcing maintenance. While major air carriers outsourced 37 percent of their aircraft maintenance in 1996, the amount spent on outsourced maintenance increased to 47 percent of maintenance costs in 2002.

#### OPERATING COSTS

FAA is requesting \$7.849 billion for its fiscal year 2005 operating budget, which is about \$370 million above the fiscal year 2004 enacted amount of \$7.479 billion. Operating costs represent the largest portion of FAA's fiscal year 2005 total budget, over 56 percent, whereas FAA's airports and capital accounts represent 25 percent and 18 percent, respectively. This past year Administrator Blakey and her staff have made notable progress in beginning the process of reining in FAA's history of operating cost growth.

Last year we reported that FAA and the National Air Traffic Controllers Association (NATCA) had entered into numerous sidebar agreements or Memoranda of Understanding (MOU's). Many of those MOU's had significant cost and/or operational impacts on the Agency, but we found that FAA had no controls over the process.

This past year, FAA developed new policies and procedures that, if properly implemented, should significantly improve controls over MOU's. As part of an agreement to extend the controllers' collective bargaining agreement for another 2 years, FAA and NATCA also rescinded or modified many of the most costly MOU's. For example, FAA and NATCA rescinded an MOU that allowed controllers transferring to larger consolidated facilities to begin earning the higher salaries associated with their new positions substantially in advance of their transfer or taking on new duties.

However, one costly MOU that we identified last year was not renegotiated. This MOU concerns "Controller Incentive Pay" (CIP), which provides controllers at 110 locations with an additional cost-of-living adjustment of between 1 and 10 percent, which is in addition to Government-wide locality pay. In fiscal year 2003, this additional cost-of-living adjustment cost FAA about \$35.6 million.

FAA also made progress in linking pay and performance—a key tenet of FAA's personnel reform efforts. As part of the 2-year extension of the controllers' agreement, FAA and NATCA agreed to tie a portion of controllers' salary increases to meeting four national performance metrics, which include goals for reducing operational errors and runway incursions. It is important to note, however, that the performance increase represents a very small percentage of the controllers' total annual pay increase. For each goal reached, controllers will receive a pay increase of 0.2 percent. However, even if none of the performance goals are met, controllers will still receive an average increase of about 4.9 percent this year because of contractual requirements.

Achieving substantial reductions in operating costs represents a tremendous challenge because salaries and benefits make up approximately 73 percent of FAA's operating budget. Because FAA's salary base is relatively fixed, it is unlikely that significant reductions in operating cost growth can be achieved in the near term without substantial improvements in the Agency's workforce productivity.

Initiatives such as new air traffic systems, technological improvements, efforts to redesign the National Airspace System, and consolidating locations all have the potential to significantly improve productivity. In the past, FAA has embarked on similar initiatives on a limited basis but was unable to demonstrate any credible gains in productivity partially because FAA did not have systems to accurately capture reliable cost and workforce-related data.

Accurate cost and workforce data are particularly critical in light of the anticipated wave of controller retirements. FAA currently estimates that about 7,000 controllers could leave the Agency over the next decade. Whether FAA will need to replace all of them on a one-for-one basis depends on many factors, including future air traffic levels, new technologies, and initiatives that FAA undertakes in its hiring and training process. However, it is clear that as a result of the anticipated increases in attrition, FAA will begin hiring and training controllers at levels the Agency has not experienced since the early 1980's.

A substantial challenge for FAA will be to hire and train new controllers within a tightly constrained operating budget. FAA has recently made significant progress in this area by renegotiating several pay rules with NATCA that previously allowed some newly hired controllers to earn base salaries in excess of \$79,000 while in training. The renegotiated rules now allow FAA to set newly hired controllers' salaries at levels that are more commensurate with an entry-level position (from \$25,000 to \$52,000), which should help FAA avoid higher costs as it begins hiring and training greater numbers of new controllers.

We have just completed an audit of this issue and will be issuing a report next month. We found that this is an area where management attention is needed to better prepare for the expected increase in retirements. For example, FAA has national estimates of expected attrition within the controller workforce, but those estimates do not take into account where vacancies will occur.

While most locations we visited had estimates of attrition over the next 2 years, they included different information in developing those estimates. One facility only projected mandatory retirements, another projected attrition for transfers but not retirements, and another provided estimates on all types of attrition (i.e., retirements, transfers, hardships, resignations, and removals).

In addition, FAA does not keep national statistics on the controller on-the-job training (OJT) process, which is the longest portion of controller training. At the locations we visited, we found that the overall time required for newly hired controllers to become certified averaged 3.1 years, but in some cases it took as long as 7 years. To effectively manage the OJT process as hiring increases, FAA will need data such as the time and costs required to complete OJT, the number of training failures, and any delays in the process to benchmark against and improve the time and costs associated with OJT.

The expected increase in controller attrition reinforces the need for FAA to have its cost accounting and labor distribution systems in place and operating effectively. This past year, FAA has made some progress with its cost accounting system, but there has been very little progress in fielding the labor distribution system planned for air traffic employees. That system is critical for managing the expected wave of controller retirements. FAA is aware of this need and the Chief Operating Officer for the Air Traffic Organization has committed to putting both of these systems in place.

#### MAJOR ACQUISITIONS

FAA modernization projects have historically experienced considerable cost growth, schedule slips, and shortfalls in performance. In the current budget environment, cost growth and schedule slippages experienced in the past are no longer affordable or sustainable. Cost and schedule problems with ongoing modernization efforts have serious consequences because they result in postponed benefits, the crowding out of other modernization projects, costly interim systems, or a reduction in the number of units procured. In the past, the severity of these problems has been masked by the size of a modernization account that either grew or stayed constant.

We note that FAA has made downward adjustments in its fiscal year 2005 request for a number of modernization projects. These projects have merit but they face fundamental problems with respect to misjudging technological maturity, unexpected cost growth, or concerns about how to move forward in a cost-effective way.

—The Local Area Augmentation System (LAAS) is a new precision approach and landing system. In December 2002, we reported that expectations for the cost, schedule, and performance of the new system needed to be reset because the new landing system was not as mature as FAA expected. Category I LAAS was planned for 2006, and more demanding Category II/III performance is now a research and development effort with uncertain completion dates. After assessing contractor progress, FAA believes that it will take considerably longer, as much as 21 months, to complete just the first phase of LAAS.

—Controller-Pilot Data Link Communications (CPDLC) is a new way for controllers and pilots to share information that is analogous to wireless email. FAA is deferring plans for CPDLC because of concerns: (1) about how quickly users would equip with new avionics; (2) that the approved program baseline of \$167 million was materially understated and no longer valid; and, (3) about the impact on the operations account, which is already overburdened.

—Next Generation Air-to-Ground Communications System (NEXCOM) is an effort to replace aging analog radios and foster the transition to digital communications. The first segment of NEXCOM (new radios and new ground infrastructure for digital communications) was expected to cost \$986 million. However,

the full cost of implementing NEXCOM throughout the National Airspace System was uncertain, but later segments were estimated to cost \$3.2 billion. In addition, NEXCOM was controversial with airlines because of FAA's preferred technology. While FAA will move forward with replacing older radios, it has postponed making decisions about NEXCOM ground system development.

While we see positive signs that the Administrator and her team are addressing fundamental problems with major acquisitions, additional steps are needed.

—*Developing reliable cost and schedule estimates.*—Last year, we reported that despite the benefits of acquisition reform granted in 1996, cost growth and scheduled slips in modernization efforts are all too common. For example, we analyzed 20 major acquisition projects and found that 14 of these projects experienced cost growth of over \$4.3 billion (from \$6.8 billion to \$11.1 billion), which represents considerably more than the FAA's annual appropriation for modernizing the National Airspace System.

For example, the cost of the Standard Terminal Automation Replacement System (STARS), which will supply new controller displays and related computer equipment for FAA's terminal facilities, has nearly doubled from \$940 million to \$1.69 billion.

FAA has already obligated \$1.1 billion through fiscal year 2003 and has installed 20 STARS systems, of which 19 are operational. The Agency is currently reviewing its deployment plans. We reported in September 2003 that STARS is not the same program that was planned 8 years ago. The program has shifted from a commercial off-the-shelf procurement to one that has required more than \$500 million in development costs. Moreover, because of cost growth and a schedule slip to fiscal year 2012, the benefits that supported the initial acquisition are no longer valid.

The Fiscal Year 2004 Appropriations Conference Report directs our office to review and validate the Agency's revised STARS lifecycle cost estimates. We are encouraged that FAA has made recent changes in the STARS program. To control cost growth, FAA has developed a phased approach to STARS that will use a fixed price contract and consider contractor performance before moving to the next phase. Last Tuesday, FAA approved the first phase limiting STARS to 50 locations. FAA is also developing a business case to complete its terminal modernization program. When FAA has completed its business case, we will review and validate the cost estimates.

—*Avoiding long-term cost-plus contracts.*—Our work on the cost, schedule, and performance problems of 20 major FAA acquisitions illustrates why the Agency needs to avoid entering into long-term cost-plus contracts before Agency requirements and user needs are fully understood. Cost growth associated with additional development work and changing requirements for both STARS and the Wide Area Augmentation System was absorbed fully by the government and ultimately the taxpayer.

FAA is now undertaking a large and complex automation effort through a long term, cost-plus contract called the En Route Automation Modernization (ERAM) program, which FAA estimates will cost about \$2 billion between now and 2011. FAA expects to spend over \$200 million annually on the project beginning in fiscal year 2005. ERAM is designed to replace the Host Computer System, the central nervous system for facilities that manage high-altitude traffic.

One significant exception to programs with major cost overruns with cost-plus contracts is the Advanced Technologies and Oceanic Procedures program (ATOP), an effort to modernize FAA facilities that manage air traffic over the Atlantic and Pacific Oceans. Because FAA has relied on what is largely a fixed price contract and kept requirements stable, the costs associated with additional software development and correcting software problems discovered during testing, until recently, have been absorbed by the contractor.

Due to software development problems and pending delays, FAA modified the contract and increased its value by \$11 million in an effort to maintain the Agency's schedule for deploying the new system to Oakland by the end of June. This is a modest adjustment compared to what we have seen with other modernization projects that relied on cost-plus contracts.

While the \$11 million can be accommodated in the current ATOP cost baseline, the critical issue is what happens between now and February 2005. This time frame is important because the recent contract modification limits the contractor's responsibility for paying to fix software problems FAA finds in ATOP after February 28, 2005. FAA expects to complete work on the initial version of ATOP software (required for Oakland) shortly and plans to test the more advanced version of ATOP software by the end of this year. Given the change in

the contract and tight time frames, it will be critical for FAA to identify all software problems before February 28, 2005.

—*Improving contract management.*—Last year, we reported that FAA’s management of cost-reimbursable contracts was deficient, lacked accountability, and did not adequately protect against waste and abuse. Our audits have found that FAA officials did not: (1) obtain audits of billions of dollars in expenditures on cost-reimbursable contracts; (2) ensure reliable government cost estimates were prepared and used in evaluating contracts; and, (3) properly account for billing and expenditures to prevent overpayments. For example, our current audit work has identified that FAA officials did not obtain audits of 17 cost-reimbursable contracts with a total value of \$6.7 billion.

In January 2004, when we rendered our opinion on the Department’s financial statements, we identified these deficiencies as a material weakness, and FAA is implementing a detailed action plan to correct the deficiencies. We are working with FAA to ensure that these actions are fully implemented. We do want to note that FAA achieved a “clean” opinion on its fiscal year 2003 financial statements.

#### AIRPORTS

Finally, funding for the airport improvement programs (AIP) has seen substantial increases over the past several years. FAA’s AIP account has increased from \$1.5 billion in 1996 to \$3.5 billion in 2005. This is on top of passenger facility charges (PFCs) that airports collect (up to \$4.50 per passenger) that FAA estimates will generate over \$2 billion in fees in 2004. FAA projections suggest that a similar amount will be collected in 2005.

The increased amounts of AIP funding and PFC collections are directed by law toward airport-related projects, such as new runways. However, FAA also incurs costs to its other accounts in order to support many of the airport projects. For example, FAA’s Facilities and Equipment (F&E) and Operations accounts bear the cost of air traffic related projects, such as new weather or instrument landing systems and the redesign of airspace to support new runways.

An emerging issue for FAA’s budget is whether or not airport funds should be used to support some air traffic control related projects. In its budget request, FAA observes that new systems once considered beneficial to FAA air traffic operations have evolved to provide significant benefits to airport operators and users. FAA’s budget submission identifies several systems that should be considered for AIP funding instead of funding from the F&E account.

Although AIP funds can be used for this purpose, the change would represent a shift in the allocation of budgetary resources. FAA estimates that this would impact the AIP account in fiscal year 2005 by about \$30 million, but this number could grow as more capacity projects come on line. Accordingly, FAA needs to identify and quantify all the specific systems that will be needed to support new infrastructure projects and then identify the funding sources that will be used to pay for them.

A longstanding problem that we continue to address through our work is diversion of airport revenues by airport sponsors or owners. We have been reviewing revenue diversions for over 13 years. Between 1991 and 2000, our audits disclosed over \$344 million in diverted revenue. Last year, we reported on revenue diversions at five large airports, including one airport whose sponsor, a local government agency, diverted about \$40 million to projects not related to the airport.

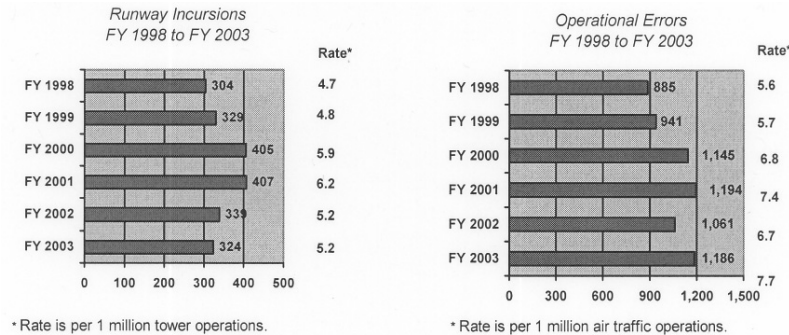
Our work shows that FAA’s oversight of revenue diversions is limited. In the past, FAA has maintained that it did not have the resources to devote to this issue. We recently met with the Associate Administrator for Airports and members of her staff to discuss FAA’s specific plans to increase the Agency’s oversight of revenue diversions. We plan to meet next month to review progress and discuss how we can coordinate efforts. These are steps in the right direction; the key now is follow-through.

#### AVIATION SAFETY ISSUES

In terms of safety, FAA and U.S. air carriers have maintained a remarkable safety record. The January 2003 Air Midwest crash in Charlotte was the only fatal commercial accident in the past 2 years. However, operational errors pose a significant safety risk, with an average of three operational errors per day and one serious error (those rated as high risk) every 7 days. In fiscal year 2003, the number of operational errors increased 12 percent to 1,186, or 125 more than the number of incidents that occurred in fiscal year 2002. Additionally, while runway incursions have continued to decline for a second year in a row, there is still an average of nearly 1 runway incursion per day and an average of 1 serious runway incursion



every 11 days (those incursions that barely avoided or had significant potential for a collision).



As shown in the following table, while the total number of runway incursions has decreased, during the first 6 months of fiscal year 2004, the most serious runway incursions have increased. Also, the total number of operational errors continue to increase, even though the most serious, or high severity, operational errors decreased during this same time period.

#### RUNWAY INCURSIONS AND OPERATIONAL ERRORS—OCTOBER 1, 2003 THROUGH MARCH 31, 2004<sup>1</sup>

	Total Incidents			Most Serious Incidents		
	Fiscal Year 2003	Fiscal Year 2004	Percent Change	Fiscal Year 2003	Fiscal Year 2004	Percent Change
Runway Incursions .....	165	157	(5)	13	18	38
Operational Errors .....	495	511	3	27	21	(22)

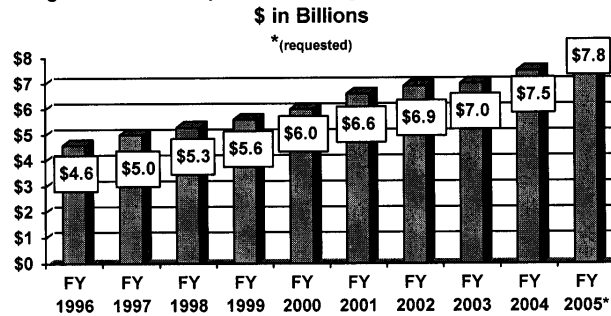
<sup>1</sup> Fiscal year 2004 information is preliminary as all incidents may not have received a final severity rating. Serious incidents for runway incursions include category A and B incidents. Serious incidents for operational errors include high-severity incidents.

This past year, we also reported that improvements are needed in FAA's oversight of a growing trend toward air carrier use of outsourced maintenance facilities. While major air carriers outsourced 37 percent of their aircraft maintenance expense in 1996, the amount spent on outsourced maintenance increased to 47 percent of maintenance costs in 2002. Yet, over 90 percent of FAA's inspections are still focused on in-house maintenance, leaving contract repair stations inadequately reviewed. In response to our audit, FAA agreed to develop a new process to identify repair stations that air carriers use to perform safety-critical repairs and target inspector resources to those facilities.

#### ABATING A TREND OF OPERATING COST GROWTH

FAA is requesting \$7.849 billion for its fiscal year 2005 operating budget, which is about \$370 million above the fiscal year 2004 enacted amount of \$7.479 billion. Operating costs represent the largest portion of FAA's fiscal year 2005 total budget, over 56 percent, whereas FAA's airports and capital accounts represent 25 percent and 18 percent respectively. As shown in the following graph, FAA's operating costs have been increasing substantially over the past 9 years.

Figure 1. FAA's Operations Budget - FY 1996 to FY 2005\*



This past year Administrator Blakey and her staff have made notable progress in beginning the process of reining in FAA's history of operating cost growth. Several areas stand out in particular.

—*MOU's.*—Last year, we reported that FAA and the National Air Traffic Controllers Association (NATCA) had entered into numerous sidebar agreements or Memoranda of Understanding (MOU's). Many of those MOU's had significant cost and/or operational impacts to the Agency, but we found that FAA had virtually no controls over the process. This past year, FAA developed new policies and procedures that, if properly implemented, should significantly improve controls over MOU's. As part of an agreement to extend the controllers' collective bargaining agreement for another 2 years, FAA and NATCA also rescinded or modified many of the most costly MOU's. For example:

—FAA and NATCA rescinded an MOU that allowed controllers transferring to larger consolidated facilities to begin earning the higher salaries associated with their new positions substantially in advance of their transfer or taking on new duties. At one location, controllers received their full salary increases 1 year in advance of their transfer (in some cases going from an annual salary of around \$55,000 to over \$99,000). During that time, they remained in their old location, controlling the same airspace, and performing the same duties. At three locations alone, we found FAA incurred over \$2.2 million in unnecessary one-time costs as a result of this MOU.

—FAA and NATCA also renegotiated another MOU for a new free flight tool that originally gave each controller two \$250 cash awards and a time-off award of 24 hours for meeting certain training milestones on the new system. The MOU contained no distinction of awards for individual contributions other than coming to work and attending training. At six facilities alone, this MOU resulted in FAA incurring approximately \$1.3 million in individual cash awards and 62,500 hours in time off, which is the equivalent of approximately 30 full-time positions.

However, one costly MOU that we identified last year was not renegotiated. This MOU concerns "Controller Incentive Pay" (CIP), which provides controllers at 110 locations with an additional cost-of-living adjustment of between 1 and 10 percent, in addition to Government-wide locality pay. For example, like all other Federal and FAA employees in the Washington Metropolitan area, controllers receive 14.63 percent in Government-wide locality pay (for Calendar Year 2004). However, as a result of this MOU:

- Controllers at Dulles International also receive 4.6 percent in CIP;
- Controllers at Reagan National also receive 3.3 percent in CIP;
- Controllers at Andrews Air Force Base also receive 5.9 percent in CIP; and
- Controllers at Baltimore Washington International also receive 1.7 percent in CIP.

In fiscal year 2003, this additional cost-of-living adjustment cost FAA about \$35.6 million.

—*Flight Service Stations.*—Another area of progress this past year is FAA's A-76 study of its flight services functions, which provide general aviation pilots with aeronautical information and services such as weather briefings, flight planning assistance, and aeronautical notices. In December 2001, we issued a report showing that FAA could save approximately \$500 million over 7 years by consolidating its automated flight service stations in conjunction with deployment of new flight services software. In response, FAA began an A-76 study

to determine if flight services should be retained within the government or contracted out.

FAA has made strides in the process this past year. FAA plans to review proposals from several contractors, as well as the government's "More Efficient Organization" proposal, within the next several months and believes it will be ready to make a final determination by March 2005. A key challenge will be completing those actions under what are already tight timeframes. Keeping this process on track is important because the potential for cost savings is significant. FAA is requiring a 22 percent cost savings, or about \$478 million, over 5 years as a selection factor for determining if a proposal will be considered.

—*Pay for Performance.*—FAA also made progress in linking pay and performance—a key tenet of FAA's personnel reform efforts. As part of the 2-year extension of the controllers' agreement, FAA and NATCA agreed to tie a portion of controllers' salary increases to meeting four national performance metrics: (1) a reduction in the number of operational errors; (2) a reduction in the number of runway incursions; (3) improvements in arrival efficiency rates; and (4) improvements in on-time performance.

This now means that 78 percent of FAA's workforce will be on a pay-for-performance plan, up from 36 percent last year at this time. It is important to note, however, that in the case of controllers, the performance increase represents a very small percentage of their total annual pay increase. For each goal reached, controllers will receive a pay increase of 0.2 percent. However, even if none of the performance goals are met, controllers will still receive an average increase of 4.9 percent this year because of contractual requirements.

Other FAA employees who are on other pay systems will receive different pay increases. For example, non-bargaining unit employees on the Agency's "core compensation plan" will receive a 4.5 percent average pay increase. However, those employees are still eligible to receive a performance increase, which averages about 0.6 percent, based on an individual's job performance and not on specific goals as in the case of controllers.

—*FAA Review of Overtime and Sick Leave Usage.*—In the past, our office received several hotline complaints alleging that FAA employees at five large facilities were abusing credit hours and manipulating work schedules to increase overtime. When we made FAA aware of the allegations, the Agency took little or no action. Recently, however, we met with senior FAA officials who briefed us on measures taken to identify and address the allegations at two of the cited locations. According to FAA managers, the actions taken during the previous fiscal year have resulted in a \$4 million reduction in personnel costs and a 19 percent reduction in overtime costs. These actions appear to be steps in the right direction, but it is unclear what measures have been taken at the other FAA facilities identified in the hotlines. Accordingly, we are initiating a review of the measures planned and taken at each location cited in the hotline complaints and will be issuing a report within the next few months.

Mr. Chairman, the actions taken by the Administrator and her staff this past year are encouraging. However, it is important to keep in mind that achieving significant reductions in operating costs represents a tremendous challenge. This is because salaries and benefits make up approximately 73 percent of FAA's operating budget or about \$5.7 billion in fiscal year 2005.

FAA's operating costs are further compounded by the fact that FAA has a very high average salary base. For example, last year, the average base salary for all FAA employees was over \$87,000. We estimate that this year, the average base salary for controllers, FAA's largest workforce, will be about \$111,000,<sup>2</sup> which is exclusive of premium pay. Against FAA's high salary base, pay increases (which are a percentage of base pay) result in large dollar increases to FAA's operating costs. For example, FAA's fiscal year 2005 budget request of \$7.8 billion for operations is a total increase of about \$370 million over fiscal year 2004 appropriations. However, FAA estimates that approximately \$200 million of the \$370 million will be consumed by pay increases alone.

Because FAA's salary base is relatively fixed, it is unlikely that significant reductions in operating cost growth can be achieved without substantial improvements in the Agency's workforce productivity. Initiatives such as new air traffic systems, technological improvements, efforts to redesign the National Airspace System, and consolidating locations all have the potential to significantly improve productivity. In the past, FAA has embarked on similar initiatives on a limited basis, but it was

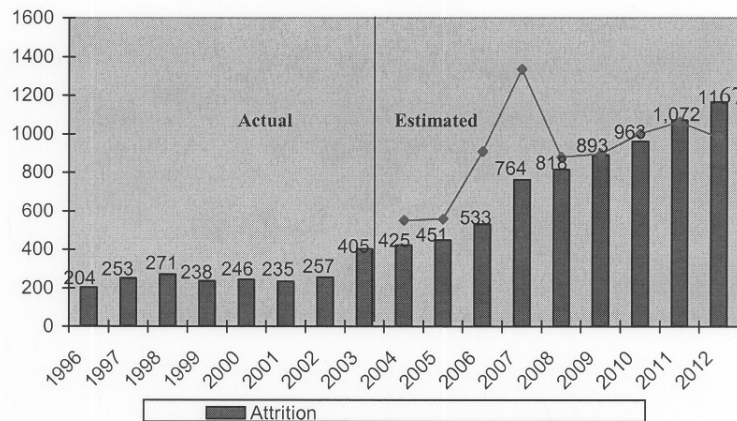
<sup>2</sup> Based on a 4.9 percent average increase, which does not take into account possible additional increases for meeting performance goals.

unable to demonstrate any credible gains in productivity partially because FAA did not have systems to accurately capture reliable cost and workforce-related data.

*Expected Increases in Controller Attrition.*—A significant issue for FAA is the expected increase in controller attrition. Attrition in FAA's air traffic controller workforce is expected to rise sharply in upcoming years as controllers hired after the 1981 Professional Air Traffic Controllers Organization controllers' strike become eligible for retirement. FAA currently estimates that nearly 7,100 controllers could leave the Agency over the next 9 years (Fiscal Years 2004–2012). In contrast, FAA has only experienced total attrition of about 2,100 controllers over the past 8 years (Fiscal Years 1996–2003).

Whether FAA will need to replace all 7,100 controllers on a one-for-one basis depends on many factors, including future air traffic levels, new technologies, and long-term initiatives that FAA undertakes. However, it is clear that as a result of the anticipated increases in attrition, FAA will begin hiring and training controllers at levels that the Agency has not experienced since the early 1980's.

**Figure 2. FAA Air Traffic Controller Attrition Compared to Retirement Eligibility**



\* Attrition data are as of November 2003. The number of controllers becoming eligible includes only those controllers reaching retirement eligibility in that year and does not include prior years. Retirement eligibility estimates are as of December 31, 2003.

We have just completed an audit of FAA's process for placing and training air traffic controllers and will be issuing a report next month. We found that this is an area where additional management attention is needed. For example:

- FAA has national estimates of expected attrition within the controller workforce, but those estimates do not take into account where vacancies will occur. It is almost certain that many will be at some of the busiest and most critical facilities within the National Airspace System.
- While most locations we visited had estimates of attrition over the next 2 years, they included different information in developing those estimates. One facility only projected mandatory retirements, another projected attrition for transfers but not retirements, and another provided estimates on all types of attrition (i.e., retirements, transfers, hardships, resignations, and removals).
- In addition, FAA does not currently have a selection process for determining if newly hired controllers have the knowledge, skills, and abilities to complete training and become certified at the facility level of their assigned location.
- FAA does not keep national statistics on the controller on-the-job training (OJT) process, which is the longest portion of controller training. At the locations we visited, we found the overall time required for newly hired controllers to become certified averaged 3.1 years but in some cases took as long as 7 years. To effectively manage the OJT process as hiring increases, FAA will need data such as the time and costs required to complete OJT, the number of training failures, and delays in the process to benchmark against and improve the time and costs associated with OJT.

A substantial challenge for FAA will be to hire and train new controllers within a tightly constrained operating budget. FAA has recently made significant progress in this area by renegotiating several pay rules with NATCA that previously allowed some newly hired controllers to earn base salaries in excess of \$79,000 while in training. The renegotiated rules now allow FAA to set newly hired controllers' salaries at levels that are more commensurate with an entry-level position (from \$25,000 to \$52,000), which should help FAA avoid higher costs as it begins hiring and training greater numbers of new controllers.

One point worth noting, Mr. Chairman, is that new controllers will generally have lower base salaries than the retiring controllers they replace. Over time, this could help reduce FAA's average base salary and, in turn, help reduce FAA's operating cost growth. However, if FAA does not place new controllers where and when they are needed, the potential reductions in base salaries will be offset by lower productivity as a result of placing too many or too few controllers at individual facilities.

To effectively manage the expected increase in controller attrition, FAA needs accurate cost and workforce data, which underscores the urgency of getting the Agency's cost accounting and labor distribution systems in place and operating effectively. The Chief Operating Officer for the Air Traffic Organization has committed to putting both of these systems in place. This past year, FAA has made some progress with its cost accounting system, but there has been very little progress in fielding the labor distribution system planned for air traffic employees. That system is critical for managing the expected wave of controller retirements.

—*Cost Accounting.*—In 2003, FAA's cost accounting system was partially operational in two of FAA's five lines of business. FAA produced limited cost accounting information for the Air Traffic Services line of business, a major component of the new Air Traffic Organization, and for the Commercial Space Transportation line of business. FAA made progress during the year by assigning some overhead costs properly, but much more needs to be done. For example, FAA is unable to assign about \$1.3 billion of costs to individual facilities. Until these costs can be assigned, managers will lack the information they need to determine the true cost of facility operations.

—*Labor Distribution.*—CRU-X is the labor distribution system FAA chose to track hours worked by air traffic employees. As designed, CRU-X could have provided credible workforce data for addressing concerns about controller staffing, related overtime expenditures, and help determine how many controllers are needed and where. However, CRU-X has not been deployed as designed because of a September 2002 agreement between FAA and NATCA that limited the system's capability to gather data regarding workforce productivity. Specifically, the agreement eliminated (1) requirements for controllers to sign in and out of the system when arriving or leaving work, and (2) tracking time spent by employees performing collateral duties.

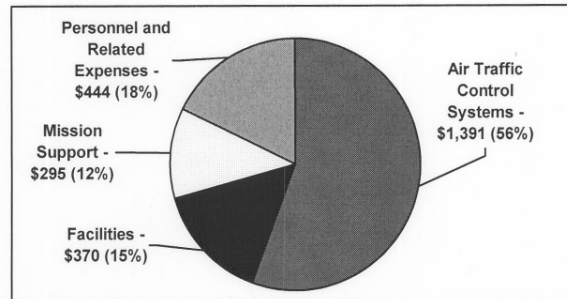
In February 2004, FAA provided NATCA with substantive changes planned for the system and began negotiations with the union in March. FAA and NATCA need to complete actions to resolve internal control deficiencies with CRU-X and implement the system as quickly as possible so the Agency and union have objective data to determine how many controllers are needed and where.

#### BRINGING FISCAL DISCIPLINE AND ACCOUNTABILITY TO FAA MODERNIZATION EFFORTS

FAA is requesting \$2.5 billion for the Facilities and Equipment account for fiscal year 2005. This represents a reduction of over \$350 million from last year's appropriated level of \$2.86 billion and nearly \$500 million less than the authorized level. Historically, FAA's modernization projects have experienced considerable cost growth, schedule slips, and shortfalls in performance.

In the current budget environment, cost growth and schedule slippages experienced in the past are no longer affordable or sustainable. As the following chart shows, only 56 percent of FAA's \$2.5 billion budget request for Facilities and Equipment is for developing and acquiring air traffic control modernization projects. The remaining funds are for salaries, FAA facilities, and mission support.

Figure 3. FAA's FY 2005 Facilities and Equipment Budget Request  
\$ Millions



Source: FAA

(Percentages may not add up to 100% due to rounding)

Cost and schedule problems with ongoing modernization efforts have serious consequences because they result in postponed benefits (in terms of safety and capacity), the crowding out of other modernization projects, costly interim systems, or a reduction in units procured. In the past, the severity of these problems has been masked by the size of a modernization budget that either grew or stayed constant.

*Adjustments to FAA Modernization Projects.*—FAA has reduced or eliminated funding in its fiscal year 2005 request for a number of modernization projects, including, the Local Area Augmentation System, Controller-Pilot Data Link Communications, and the Next Generation Air to Ground Communications System. These efforts were longer-term in nature and called for airspace users to purchase and install new avionics. Funding reductions also reflect an emphasis on near-term FAA infrastructure projects.

These projects have merit but they face problems irrespective of funding that needed to be addressed with respect to misjudging technological maturity, unexpected cost growth, or concerns about how to move forward.

—The Local Area Augmentation System (LAAS) is a new precision landing and approach system. It was expected to cost \$696 million and to be deployed in 2006, 4 years later than originally planned. FAA is not requesting funds for LAAS in fiscal year 2005 and will use funds from fiscal year 2004 to continue work on the new system. In December 2002, we reported that expectations with respect to cost, schedule, and performance needed to be reset because the new landing system was not as mature as FAA expected.<sup>3</sup> Category I LAAS was planned for 2006 and the more demanding CAT II/III LAAS is now a research and development effort with uncertain completion dates.<sup>4</sup>

Considerably more development work is required for LAAS than FAA expected just a year ago. The key issue is how to ensure the system will work as safely as intended. After assessing contractor progress, FAA estimated that it could take up to 21 months and an additional \$37 million for the contractor to recover and complete just the first phase for LAAS.

—Next Generation Air-to-Ground Communications System (NEXCOM) is an effort to replace aging analog radios and foster the transition to digital communications. The first segment of NEXCOM (new radios and new ground infrastructure for digital communications) was expected to cost \$986 million. FAA is requesting \$31 million for NEXCOM in fiscal year 2005, \$54 million less than last year's appropriated level of \$85 million. FAA will move forward with replacing older radios (the least complex element of the NEXCOM effort) but has postponed making decisions about NEXCOM ground system development and is re-evaluating its approach for modernizing the air to ground communications. The full cost of implementing NEXCOM throughout the NAS was uncertain but

<sup>3</sup> FAA Needs to Reset Expectations for LAAS Because Considerable Work Is Required Before It Can Be Deployed for Operational Use (AV-2003-006, December 16, 2002).

<sup>4</sup> CAT I precision approach has a 200 foot ceiling/decision height and visibility of ½ mile. CAT II precision approach has a 100 foot ceiling/decision height and visibility of ¼ mile. CAT III precision approach and landing has a decision height and visibility of less than 100 feet down to the airport surface.

later segments were estimated to cost \$3.2 billion. Also, NEXCOM has been controversial with the airlines because of FAA's preferred technology.

FAA's decision to postpone decisions about NEXCOM gives the Agency opportunities to develop a cost-effective approach for meeting the air-to-ground communications needs of the National Airspace System. While FAA replaces older radios, the Agency needs to determine how it will: (1) sustain existing communications infrastructure; (2) address frequency congestion problems in the short term; and, (3) meet the communications needs of FAA and airspace users in the most cost-effective way.

—Controller-Pilot Data Link Communications (CPDLC) is a new way for controllers and pilots to share information that is analogous to wireless email and considered an enabling technology for Free Flight. FAA began using CPDLC at Miami Center in October 2002 and planned to deploy the system to other facilities that manage high altitude traffic at a cost of \$167 million. FAA deferred these plans for expanding CPDLC last year. The Conference report for the fiscal year 2004 Appropriations Act directed our office to look into, among other things, the circumstances leading to termination of the CPDLC program and what control could have been put in place to avoid a program failure of this type.

We found that a number of factors contributed to FAA's decision, including concerns about how quickly users would equip with new avionics and the fact the approved program baseline of \$167 million was no longer valid. FAA estimates that it would cost \$236.5 million for eight locations—an increase of \$69 million for fewer than half the locations initially planned.

Another factor was the impact on the operations account, which is already overburdened. CPDLC would have added \$63 million in cost to the operations account for, among other things, controller training and overtime (for just eight locations), and \$20 million annually for the cost of data link messages. We are continuing our work on CPDLC and will report back to this committee later this year.

We see positive signs that the Administrator and her team are addressing problems with major acquisitions. However, there should be no mistake that FAA's efforts are in the early stages and a number of fundamental steps are needed. They include:

- Developing reliable cost and schedule estimates,
- Avoiding long-term cost-plus contracts, and
- Establishing controls to prevent waste and abuse.

*Developing Reliable Cost and Schedule Estimates.*—Last year, we reported that despite the benefits of acquisition reform granted in 1996, cost growth and scheduled slips in modernization efforts are all too common. For example, we analyzed 20 major acquisition projects and found that 14 of these projects experienced cost growth of over \$4.3 billion (from \$6.8 billion to \$11.1 billion), which represents considerably more than the FAA's annual appropriation for modernizing the National Airspace System. Also, 13 of the 20 projects accounted for delays ranging from 1 to 7 years. FAA recognizes these problems and the Agency's strategic plan—Flight Plan 2004–2008—establishes a performance target so that 80 percent of critical acquisitions are both on schedule and within 10 percent of budget. This is an important step.

A number of key modernization projects that have been delayed still do not have reliable cost and schedule baselines. Without better information, FAA cannot effectively plan, manage the modernization portfolio, or determine what is affordable. The following table provides information on selected acquisitions that do not have reliable cost and schedule baselines.

#### FOUR KEY PROJECTS NEEDING UPDATED COST AND SCHEDULE BASELINES

[Dollars in Millions]

Program	Estimated Program Costs		Percent Cost Growth	Implementation Schedule		Schedule Delay Years
	Original	Current		Original	Current	
Wide Area Augmentation System .....	\$892.4	<sup>1</sup> \$2,922.4	227	1998–2001 ...	2003–TBD <sup>2</sup> ....	5
Standard Terminal Automation Replacement System .....	940.2	1,690.2	80	1998–2005 ...	2002–2012 <sup>2</sup> ....	7
Airport Surveillance Radar–11 .....	743.3	1,040.0	39.9	2000–2005 ...	2003–2013 .....	8
Integrated Terminal Weather System .....	276.1	283.7	3	2002–2003 ...	2003–2008 .....	5

<sup>1</sup> This includes the cost to acquire geostationary satellites.

<sup>2</sup> Costs and schedules are under review.

Mr. Chairman, I would like to discuss three of these projects.

—Standard Terminal Automation Replacement System (STARS) will supply new controller displays and related computer equipment for FAA's terminal facilities. FAA's official STARS acquisition cost estimate has nearly doubled from \$940 million to \$1.69 billion.

FAA has already obligated \$1.1 billion through fiscal year 2003 but has only installed 20 systems, of which 19 are operational. The Agency is currently reviewing its deployment plans. We reported in September 2003 that STARS is not the same program that was planned 8 years ago. The program has shifted from a commercial off-the-shelf procurement to one that has required more than \$500 million in development costs. Moreover, because of cost growth and a schedule slip to fiscal year 2012, the benefits that supported the initial acquisition are no longer valid.<sup>5</sup> Due to STARS delays, FAA deployed Common Automated Radar Terminal System (Common ARTS) hardware and software to 141 terminal facilities over the past 5 years.

In our 2003 report, we recommended that FAA select the most cost-effective and affordable strategy to complete terminal modernization by augmenting STARS deployment with Common ARTS. We estimated that implementing this approach would allow FAA to put at least \$220 million to better use. To date, the Agency has not ruled out keeping some Common ARTS as an alternative if STARS proves to be unaffordable or does not perform as expected.

FAA officials maintain that STARS has important capabilities, such as "Sensor Fusion," which is designed to merge data from multiple radars on controllers' displays. However, FAA continues to experience problems with the Sensor Fusion software. We have not yet seen sufficient evidence to justify FAA's conclusion that the capabilities of STARS are far superior to the capabilities of Common ARTS, and both systems are certified for use in the National Airspace System.

The fiscal year 2004 Appropriations Conference Report directs our office to review and validate the Agency's revised STARS lifecycle cost estimates. We are encouraged that FAA has made recent changes in the STARS program. To control cost growth, FAA has developed a phased approach to STARS that will use a fixed price contract and consider contractor performance before moving to the next phase. Last Tuesday, FAA approved the first phase, limiting STARS to 50 locations. FAA is also developing a business case to complete its terminal modernization program. When FAA has completed its business case, we will review and validate the cost estimates.

—The Wide Area Augmentation System (WAAS) is a new satellite-based navigation system to enhance all phases of flight. The program has a long history of uncertainty regarding how much the system will cost, when it will be delivered, and what benefits can be obtained. Limited WAAS services became available in July 2003, but additional work is needed to expand WAAS coverage through additional ground stations. FAA has obligated over \$800 million on WAAS and expects to spend \$100 million on the new system in fiscal year 2005.

WAAS was expected to provide Category I performance to the majority of the Nation's airports but will provide something less when the system is deployed. Based on our discussions with FAA, the subcommittee should expect to see a reduction in overall WAAS baseline costs in the \$300 to \$400 million range to reflect the fact that Agency will not pursue Category I performance.

—The Integrated Terminal Weather System (ITWS) provides air traffic managers with a 20-minute forecast of weather conditions near airports and can help the National Airspace System recover from periods of bad weather. FAA initially planned to complete deployment of 38 systems by 2003 at a cost of about \$276 million, but production costs increased significantly from \$360,000 to \$1 million per system. According to FAA officials, the Agency now plans to establish new cost and schedule parameters this April, and accelerate an ITWS enhancement (the Convective Weather Forecast product) in response to our December 2002 report.

*Avoiding Long-Term Cost-Plus Contracts.*—Our work on the cost, schedule, and performance problems of 20 major FAA acquisitions illustrates why the Agency needs to avoid entering into long-term cost-plus contracts before Agency requirements and user needs are fully understood. Cost growth associated with additional development work and changing requirements for both STARS and WAAS was absorbed fully by the government. In the future, FAA needs to use a more incremental

<sup>5</sup> FAA Needs to Reevaluate STARS Costs and Consider Other Alternatives, AV-2003-058, September 9, 2003.

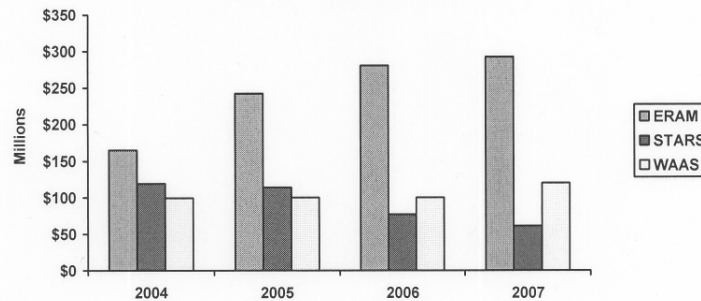


approach to complex long-term efforts until the scope of work and development are clearly defined and rely more on fixed price contracts.

FAA is now undertaking a large and complex automation effort through a long term, cost-plus contract called the En Route Automation Modernization (ERAM) program, which FAA estimates will cost about \$2 billion between now and 2011. FAA expects to spend over \$240 million annually on the project beginning in fiscal year 2005. ERAM is designed to replace the Host Computer System, the central nervous system for facilities that manage high altitude traffic. The fiscal year 2004 Appropriations Conference Report directs our office to look at executability of the program and identify program risks, including security.

The following chart illustrates planned funding for ERAM and as well as funding profiles for STARS and WAAS, two projects that have been delayed for years and do not have reliable cost estimates.<sup>6</sup> Any cost increases with these programs will have a cascading effect on other efforts and limit FAA's flexibility to begin new projects.

**Figure 4. Planned Funding for ERAM, STARS and WAAS**  
Fiscal Years 2004 to 2007  
\$ in Millions



Source: FAA's January 2004 Draft Capital Investment Plan.

Note: Cost and schedule plans for STARS and WAAS are under review.

ERAM is the largest and most complex automation effort FAA has embarked on since the Advanced Automation System. We anticipate completing our first review of this complex program this year. At this stage, we see key ERAM program risks as: (1) an aggressive schedule; (2) complex software development and integration; and, (3) successfully managing a long-term cost-plus contract that is already valued at close to \$1 billion. As FAA moves closer to the production phases of ERAM, the Agency should seek opportunities to use fixed-price contracting mechanisms.

One significant exception to programs with major cost overruns is the Advanced Technologies and Oceanic Procedures program (ATOP), an effort to modernize FAA facilities that manage air traffic over the Atlantic and Pacific Oceans.<sup>7</sup> This effort has experienced some serious and unexpected software development and testing problems. Problems are traceable to the fact that the contractor relied on non-development software that could not meet FAA requirements.

In June 2001, FAA awarded a \$217 million contract for ATOP to provide oceanic air traffic systems. Since the contract was awarded, the contractor has experienced problems with software development and testing. As a result, the first phase of testing, known as factory acceptance testing, was completed 12 months behind schedule. In October 2003, FAA began operational testing to determine whether the new automation system would perform as intended. This testing uncovered further software problems that forced FAA to halt testing of ATOP's air traffic management functions. FAA subsequently resumed and completed that round of testing and begin site acceptance testing in April 2004.

<sup>6</sup> STARS and WAAS funding profiles are currently under review by FAA.

<sup>7</sup> For additional details on ATOP, see Status Report on FAA's Advanced Technologies and Oceanic Procedures (report number AV-2004-037, March 31, 2004).

FAA has relied on what is largely a fixed price contract and kept requirements stable. Consequently, the costs associated with additional software development and correcting software problems discovered during testing have been absorbed by the contractor—not the government. However, due to the software problems and pending delays, FAA decided to modify the contract in an effort to maintain the schedule to install the system in Oakland. The modification will expand the use of cost-plus contract elements (including time and materials) and increase the value of the contract by approximately \$11 million.

While this \$11 million adjustment is modest and can be accommodated in the current ATOP cost baseline, the critical issue is what happens between now and February 2005. This time frame is important because the recent contract modification limits the contractor's responsibility for paying to fix software problems FAA finds in ATOP after February 28, 2005. According to FAA, after work on the initial version of ATOP software (required for Oakland) is complete, the Agency will test the more advanced version at its Atlantic City Technical Center by the end of this year. Given the change in the contract and tight time frames, it will be critical for FAA to identify all software problems before February 28, 2005.

We will continue to monitor progress with ATOP. The Conference report accompanying the Appropriations Bill for fiscal year 2004 directed our office to compare FAA's pursuit of oceanic automation capabilities to the experiences of NAVCanada and other oceanic air traffic service providers. We intend to begin work on this later this year.

*Improving Contract Management.*—Last year, we reported that FAA's management of cost-reimbursable contracts was deficient, lacked accountability, and did not adequately protect against waste and abuse. Our audits have found that FAA officials did not: (1) obtain audits of billions of dollars in expenditures on cost-reimbursable contracts; (2) ensure reliable government cost estimates were prepared and used in evaluating contracts; and (3) properly account for billing and expenditures to prevent overpayments.

For example, our current audit work has identified that FAA officials did not obtain audits of 17 cost reimbursable contracts with a total value of \$6.7 billion. In addition, we reported that FAA officials did not ensure that contractor employees were qualified to do the work. For example, a contractor employee charged approximately \$255,000 as a senior systems engineer, even though that individual had only a Bachelors of Arts Degree in Psychology, and his past work history indicated no experience in engineering.

When we rendered our opinion on the Department's financial statements we identified these deficiencies as a material weakness, and FAA has developed and begun implementation of a detailed action plan to correct the deficiencies. For example, FAA has made progress in reducing the backlog of 459 completed contracts by closing out 279 contracts valued at \$2.55 billion. In addition, FAA is providing adequate funding to perform cost-incurred audits of contract expenditures. Congress provided \$3 million in fiscal year 2004 funds for this purpose, and FAA is establishing procedures to ensure the funds are applied effectively by focusing on larger contracts.

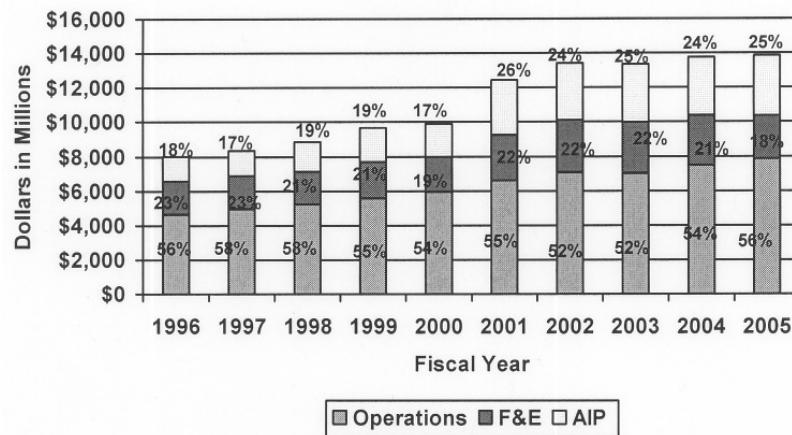
FAA is also establishing a centralized control in FAA headquarters to track the status of all completed and ongoing cost reimbursable contracts in order to meet Congressional direction to audit 100 percent of contracts over \$100 million and 15 percent of contracts less than \$100 million. We are working with FAA to ensure that these plans are implemented.

#### AIRPORT FUNDING ISSUES

Funding for the airport improvement programs (AIP) has seen substantial increases over the past several years. FAA's AIP account has increased from \$1.5 billion in 1996 to \$3.5 billion in 2005. This is on top of passenger facility charges (PFCs) that airports collect. The maximum amount allowed has increased from \$3.00 to \$4.50 per passenger, and FAA estimates that PFCs will generate over \$2 billion in fees in 2004. FAA projections suggest that a similar amount will be collected in 2005.

The following chart illustrates funding levels for FAA's airports, operations, and facilities and equipment accounts from fiscal year 1996 through fiscal year 2005. It shows that AIP is taking up an increasing share of FAA's overall budget. For example, in fiscal year 1996 AIP made up 18 percent of FAA's total budget whereas in fiscal year 2005 AIP represents 25 percent of the Agency's total budget.

Figure 5. FAA's Budget By Program (FYs 1996-2005)



*Emerging Issue for AIP.*—The increased amounts of AIP funding and PFC collections are directed by law toward airport-related projects, such as new runways. However, FAA also incurs costs to its other accounts in order to support many of the airport projects. For example, FAA's Facilities and Equipment (F&E) and Operations accounts bear the cost of air traffic related projects such as new weather or instrument landing systems and redesigning airspace in order to support new runways.

An emerging issue for FAA's budget is whether or not airport funds should be used to support some air traffic control related projects. In its budget request, FAA observes that new systems once considered beneficial to FAA air traffic operations have evolved to provide significant benefits to airport operators and users. FAA's budget submission identifies several systems that should be considered for AIP funding instead of funding from the F&E account.

Although AIP funds can be used for this purpose, the change would represent a shift in the allocation of budgetary resources. FAA estimates that this would affect the AIP account in fiscal year 2005 by about \$30 million but this number could grow as more capacity projects come on line. Accordingly, FAA needs to identify and quantify all the specific systems that will be needed to support new infrastructure projects and then identify the funding sources that will be used to pay for them.

*Revenue Diversions.*—A longstanding problem that we continue to address through our work is diversion of airport revenues by airport sponsors or owners and a lack of effective FAA oversight. It is a matter of law that all airports receiving Federal assistance use airport revenues for the capital or operating costs of an airport. Any other use of airport revenue is considered a "revenue diversion." Examples of common revenue diversions include charges to the airport for property or services that were not provided, indirect costs such as promotional activities that were improperly allocated to the airport, and payments of less than fair market value for use of airport property.

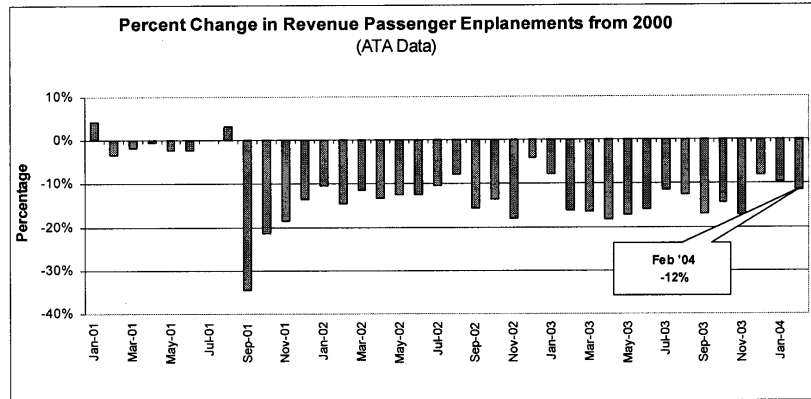
We have been reviewing revenue diversions for over 13 years. Between 1991 and 2000, our audits disclosed over \$344 million in diverted revenue. Last year, we reported on revenue diversions at five large airports, including one airport whose sponsor, a local government agency, diverted about \$40 million to other projects not related to the airport. We also just completed an audit at San Francisco International last month which disclosed about \$12 million in diverted revenue. Additionally, we have begun reviews regarding potential revenue diversion and contracting irregularities at Los Angeles International Airport.

Our work shows that FAA's oversight of revenue diversions is limited. In the past, FAA has maintained that it did not have the resources to devote to this issue. We recently met with the Associate Administrator for Airports and members of her staff to discuss FAA's specific plans to increase the Agency's oversight of revenue diver-

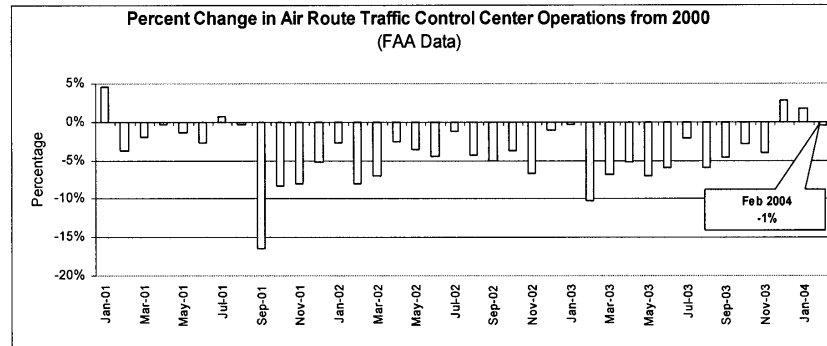
sions. We plan to meet next month to review progress and discuss how we can coordinate efforts. Clearly, these are steps in the right direction, but the key now is follow-through.

#### BEING POSITIONED FOR A REBOUND IN AIR TRAFFIC

Mr. Chairman, our testimony this morning has focused primarily on cost issues within FAA's budget. However, an important issue for this subcommittee is the fact that air traffic levels are beginning to rebound. While domestic traffic levels still fall short of the peaks experienced in 2000, there is no question that traffic is rebounding. In February 2004, the number of revenue passenger enplanements (35.1 million) was down 12 percent from February 2000, but this represents a 5 percent growth over enplanements in February 2003 (33.3 million). While this is good news for the airlines, the increased traffic levels are bringing pressure to bear on our Nation's airports, air traffic control systems, and the traveling public.



Aircraft operations have also increased significantly since September 2001. In February 2004, domestic operations handled by Air Route Traffic Control Centers were less than 1 percent below the operations handled in February 2000. The 3.63 million February 2004 operations represented nearly 11 percent growth over operations handled in February 2003.



While systemwide operations in February 2004 were slightly down from February 2000, the story is very different on an airport-by-airport basis. In 13 of the 31 largest airports, including some of those that experienced serious delays in 2000, the number of scheduled flights in March 2004 actually exceeded the number of scheduled flights in March 2000. For example, at Denver International, the number of flights scheduled for March 2004 exceeded March 2000 schedules by 10 percent and at Chicago O'Hare, scheduled flights in March exceeded 2000 levels by 9 percent.

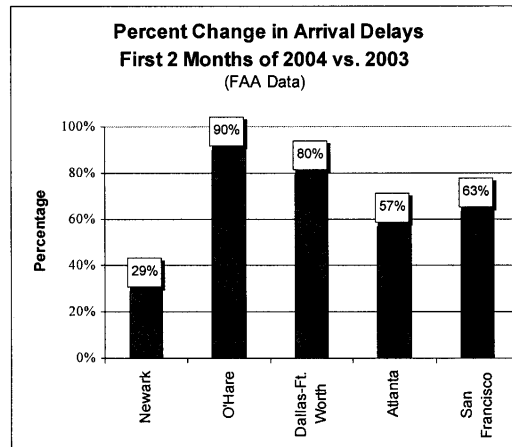
In 11 of the 13 airports where March 2004 scheduled flights exceeded March 2000 levels, the number of available seats scheduled still lagged behind the number of

available seats offered in March 2000. This is an indication, at least in part, of how network carriers are using regional jets in the place of narrow-body jets to connect traffic to the network hubs.

For example, in Cincinnati, a major Delta hub, scheduled flights in March 2004 were 11.5 percent higher than in March 2000, while available seats were down 7.7 percent. During this same period, regional jets, as a percentage of all aircraft operations in Cincinnati, grew from 53.8 percent to 72.3 percent. Overall, the number of flights scheduled to be operated by regional jets in March 2004 was 134 percent greater than in March 2000.

The growth in aircraft operations, especially at some of what have historically been our Nation's busiest airports creates a situation that merits careful monitoring. Although systemwide arrival delays in January and February 2004 were still 22 percent below those experienced in the first 2 months of 2000, the number is up 33 percent from the same period in 2003.

In some individual markets, the growth is particularly pronounced. At Chicago O'Hare, arrival delays during the month of March 2004 represented a 74 percent increase over delays during the same period in 2003, down from the 90 percent increase during the first 2 months of 2004. At Dallas-Fort Worth, arrival delays in January and February combined were up 80 percent over the same period in 2003.



The Department and FAA are aware of this growth in delays and the potential near-term affects on the quality of air transportation service if the growth goes unchecked. The subcommittee should also follow the situation closely. It is unlikely that the situation will reach the level of widespread system failures we experienced in the summer of 2000, but it is possible that some airports could experience disruptions in service. The FAA and the Department have been working with the industry to identify potential solutions to delay problems that might occur this summer such as high-altitude express lanes and voluntary schedule reductions.

One situation that bears watching, in particular, is the expected service growth at Washington's Dulles Airport. In June, when Independence Air is launched by former regional carrier Atlantic Coast Airlines as a new low-fare carrier, traffic at Dulles will increase significantly. Executives at Independence Air anticipate operating between 200 and 300 daily departures primarily between Dulles and East Coast destinations.

Assuming that United does not reduce service in any of the markets it had previously served using Atlantic Coast Airlines as a regional partner—and it has made no indications that it plans to do so—daily aircraft operations at Dulles could increase by more than 50 percent this summer. In addition to airside congestion, there are concerns with airport terminal services, including the resources needed to process a significantly increased number of passengers through security checkpoints.

That concludes my statement,<sup>8</sup> Mr. Chairman. I would be pleased to address any questions you or other members of the subcommittee might have.

#### ATTACHMENT 1.—RELATED OFFICE OF INSPECTOR GENERAL REVIEWS 1998–2004

##### *Operations*

Using CRU-X to Capture Official Time Spent on Representational Activities—AV–2004–033, February 13, 2004

FAA's Management of Memorandums of Understanding with the National Air Traffic Controllers Association—AV–2003–059, September 12, 2003

Safety, Cost and Operational Metrics of the Federal Aviation Administration's Visual Flight Rule Towers—AV–2003–057, September 4, 2003

FAA's Oversight of Workers' Compensation Claims in Air Traffic Services—AV–2003–011, January 17, 2003

FAA's National Airspace System Implementation Support Contract—AV–2003–002, November 15, 2002

FAA's Air Traffic Services' Policy of Granting Time Off Work to Settle Grievances—CC–2002–048, December 14, 2001

Subcontracting Issues of the Contract Tower Program—AV–2002–068, December 14, 2001

Automated Flight Service Stations: Significant Benefits Could be Realized by Consolidating AFSS Sites in Conjunction with Deployment of OASIS—AV–2002–064, December 7, 2001

Compensation Issues Concerning Air Traffic Managers, Supervisors, and Specialists—AV–2001–064, June 15, 2001

Technical Support Services Contract: Better Management Oversight and Sound Business Practices Are Needed—2000–127, September 28, 2000

Contract Towers: Observations on FAA's Study of Expanding the Program—AV–2000–079, April 12, 2000

Staffing: Supervisory Reductions will Require Enhancements in FAA's Controller-in-Charge Policy—AV–1999–020, November 16, 1998

Personnel Reform: Recent Actions Represent Progress but Further Effort is Needed to Achieve Comprehensive Change—AV–1998–214, September 30, 1998

Liaison and Familiarization Training—AV–1998–170, August 3, 1998

##### *Acquisition and Modernization*

FAA's Advanced Technologies and Oceanic Procedures—AV–2004–037, March 31, 2004

FAA Needs to Reevaluate STARS Costs and Consider Other Alternatives—AV–2003–058, September 10, 2003

Status of FAA's Major Acquisitions—AV–2003–045, June 27, 2003

Integrated Terminal Weather System: Important Decisions Must Be Made on the Deployment Strategy—AV–2003–009, December 20, 2002

FAA's Progress in Developing and Deploying the Local Area Augmentation System—AV–2003–006, December 18, 2002

Follow-up Memo to FAA on STARS Acquisition—CC–2002–087, June 3, 2002

Letter Response to Senator Richard Shelby on FAA's Advanced Technologies and Oceanic Procedures (ATOP)—CC–2001–210, April 12, 2002

Status Report on the Standard Terminal Automation Replacement System—AV–2001–067, July 3, 2001

Efforts to Develop and Deploy the Standard Terminal Automation Replacement System—AV–2001–048, March 30, 2001

##### *Aviation Safety*

Review of Air Carriers' Use of Aircraft Repair Stations—AV–2003–047, July 8, 2003

Operational Errors and Runway Incursions—AV–2003–040, April 3, 2003

Air Transportation Oversight System (ATOS)—AV–2002–088, April 8, 2002

Oversight of FAA's Aircraft Maintenance, Continuing Analysis, and Surveillance Systems—AV–2002–066, December 12, 2001

Further Delays in Implementing Occupational Safety and Health Standards for Flight Attendants Are Likely—AV–2001–102, September 26, 2001

<sup>8</sup>This testimony was conducted in accordance with Government Auditing Standards prescribed by the Comptroller General of the United States. The work supporting this testimony was based on prior and ongoing audits conducted by the Office of Inspector General. We updated material to reflect current conditions or to reflect fiscal year 2005 budget requests as necessary.

Despite Significant Management Focus, Further Actions Are Needed To Reduce Runway Incursions—AV-2001-066, June 26, 2001

*Airports*

Revenue Diversions at San Francisco International Airport—SC-2004-038, March 31, 2004

Oversight of Airport Revenue—AV-2003-030, March 20, 2003

These reports can be reviewed on the OIG website at <http://www.oig.dot.gov>.

Senator SHELBY. Senator Stevens, do you have an opening statement?

Senator STEVENS. I apologize for being late. There are too many other meetings, but I am happy to see the witnesses here today and I will have some questions when the time comes.

Senator SHELBY. Thank you.

Senator MURRAY. Mr. Chairman, before you go to questions I just want to recognize that our National Teacher of the Year has joined us in the audience today, Dennis Griner from Palouse High School in Palouse, Washington, and we are proud to see you here today.

Senator SHELBY. Thank you, Senator Murray.

SAFETY

Safety is, and I believe must always remain, FAA's top priority. Madam Administrator, I know how serious your commitment to improving aviation safety is. What are your top safety priorities for fiscal year 2005? You are doing well, but you want to do better.

Ms. BLAKEY. You are absolutely right. One of the things that we are most committed to is working with our carriers, the airline industry, to develop a safety system approach that means we are all looking at risk factors. That we are all looking at the way we should manage together that potential risk, and not wait till an accident or incident happens, but really getting in front of it.

Senator SHELBY. What is your biggest safety concern?

Ms. BLAKEY. Well, I think right now what we would like to do is marry up data and marry up information in a way that we have never done before. For example, we have two systems out there that are great. One is called Arrival Sequencing Program (ASP), which gives pilots, dispatchers, all of those who are operating the system a way to voluntarily say something went wrong here. They can do it without penalty and that gives us again access to information we would not have from their perspective. You know, a dispatcher who says later on, I probably should not have done that—a little too close to scud-running; a pilot who says yes, I probably did make an error there that is worth taking note.

We also have a way now, a program called Flight Operational Quality Assurance (FOQA), which takes data, routine data off the flight data recorder and lets us analyze that and see what the machine is doing, see what is happening. We think we need to marry that kind of information together and as an industry and as the FAA, really work to make sure that we are inspecting the right things, analyzing the right things, making training changes, and doing air traffic control procedures better. All of this will help.

FAA'S OPERATIONS ACCOUNT

Senator SHELBY. The FAA's operations account has witnessed significant increases over the years. Could both of you identify the

major cost drivers of the Operations appropriation? First, Ms. Blakey.

#### PERSONNEL COSTS

Ms. BLAKEY. Mr. Chairman, I think the Inspector General has it right. There is no question about the fact that the major cost driver is our personnel costs. After all, that is what the FAA is about. It is an operating agency and about 80 percent of that operations cost goes to personnel. Also there are a lot of contractual obligations that limit the flexibility we have in controlling costs. I would also say that the way we have gone about modernization has increased capacity and added additional personnel requirements. It was not done to drive down operations costs. It was done with an eye to increasing capacity in the system, with more nav aids, with more technology, which means more things to maintain and more people to operate them. All of that has, as we have overlaid better and better programs, increased safety, but that takes people and certainly that has driven the costs up, as well.

#### MOU'S

Senator SHELBY. Last year it became clear that FAA's oversight of MOU's was seriously inadequate. The situation has been well documented by the Inspector General, Mr. Mead. While MOU's often serve useful purposes, they also have cost implications. In the 2004 Appropriations Act, Congress required the FAA to establish a central database on all MOU's. Has this been accomplished? And what was the total budgetary impact of the MOU's and what processes of control have been put in place?

Do you want to answer that first, Mr. Mead?

Mr. MEAD. Well, we are not at an end state yet. I cannot say exactly what the total budgetary impact is but I would put the figure probably that the steps they have taken may have avoided costs something on the order of \$50 million. They have a much better handle on having an inventory of these and they have put the brakes on entering into new ones, at least ones where the Administrator would not even know about them.

I think there are one or two more out there. One that I think is particularly interesting is all Federal employees get locality pay and the controllers entered into a memorandum of understanding with FAA so they get something called controller incentive pay, which is on top of that at 110 locations. That one item is running FAA something on the neighborhood of \$25 to \$30 million per year. They have a very generous pay package.

Senator SHELBY. What is your recommendation to get control of the process?

Mr. MEAD. I think FAA is doing the right things and has the right things. I think right now I would have no additional recommendations except that they continue doing what they are doing on the memoranda of understandings.

The issue on the growth in the operations account, you can expect it to continue. It will not be as marked as it has been in the past but it is still going to continue because you have such a high salary base there. If you give a 4 percent or 5 percent pay increase on a salary base of, say, somebody who is getting \$135,000, that



is a lot more every year compounded than adding 5 percent every year on top of a salary base of \$75,000 or \$80,000.

Senator SHELBY. It adds up.

Mr. MEAD. Yes, sir, it does.

#### MODERNIZING NAS

Senator SHELBY. The FAA has a poor track record of modernizing the National Airspace System. The GAO and Transportation Inspector General have published many reports on projects that are late, overbudget, and cannot deliver as promised. Madam Administrator, what are you doing to address this long-standing problem?

Ms. BLAKEY. Well, I will tell you. As we have analyzed this, I think we need to take a very different approach and that is what our COO Russ Chew, and the entire group that is managing these accounts is committed to. What I think has been a really tremendous mistake in the past is the FAA took the approach that somehow you could predict the cost of systems that were going to be deployed over 10 years going where no one had gone before. It is one thing if you are asked to talk about a capital investment where you are pulling commercial off-the-shelf technology. You then would know how many, and know exactly where systems are going.

That was not the case with the FAA. We are talking about what essentially were research programs, but the FAA committed to figures in the baseline that would go out as many as a dozen years. The question of how long it would take to get the fundamental technology down, then what it was going to cost in a prototype stage to actually build it and deploy it was not addressed. Where should it really go? All the while you have changing traffic patterns and a whole field operation out there.

Here is what we are going to do. We are going to call research "research". We are going to chunk these projects, if you will, into much smaller stages where we commit to the initial R&D as much as possible under firm, fixed-price contracts. We will try our best to hold to that fixed price. We will also do it in stages. We will, therefore, be making the financial investments in stages so that we do not get in over our head. We can continue to analyze the benefits, and as circumstances change over 10 years, we are able to say "wait a minute", let us not put all the things in facilities that we had planned. We really can fine-tune modernization over time, and I think get much better value for taxpayer dollars.

This is what we are doing with the STARS program, one of our major programs that we feel we have to take a very different approach.

Senator SHELBY. Mr. Mead.

Mr. MEAD. Yes, I think the most important thing in these contracts where we do not know where we are buying and some of these are concepts, to go into a 10-year contract and say the pricing mechanism will be just bill me whatever it takes, with no cap—we should not be doing that. It should scare this committee. It scares me.

Senator SHELBY. It does scare us. That is why I keep asking this line of questioning.

Mr. MEAD. Every one of the programs that is in trouble falls into that pattern where it has been that type of contract.

Senator SHELBY. How are we going to deal with it? You are the Inspector General; we are the appropriators. We are working with you and the Administrator to make sure this money is spent well for the right purpose.

Mr. MEAD. I think you should insist on more fixed-price contracts coming out of FAA. I think you would see some rapid improvements. That single move, I think, would change a lot. And what the Administrator says, too, about research and development should be called research and development.

Senator SHELBY. It should be called what it is, should it not?

Mr. MEAD. We should call it like it is, yes, sir.

#### FIXED PRICE

Ms. BLAKEY. Mr. Chairman, let me also add on the firm, fixed price, I think the Inspector General and I agree on this in concept. What I would say, though, is that we cannot expect a corporate entity of any sort to assume all the risk without dramatically increasing what they are willing to commit to on a firm, fixed price, which goes back to let us take it in small stages; let us go where we can all see what this is likely to cost. Do not ask them to commit to something where they are assuming enormous risk or where they are putting in huge costs.

Senator SHELBY. Well, you have to be specific in what you want. Or, if you do not know what you want or what you are trying to improve, how can you contract for it, other than learning as you go through a cost-plus acquisition. We cannot always afford that. I do not believe that is the way to operate the FAA, do you?

Ms. BLAKEY. I do not, either. And one of the things that we have done in some of our capital programs is we have all accepted what we and our customers want. It is fine to say we want a system with certain capabilities but the question of how do you get the technology to do that—we have not always been realistic about how difficult that was going to be. And frankly, in some of the areas where we have cut back on the F&E programs, technology was the problem.

Mr. MEAD. I have noticed over the years they pretend that they know what they are buying and you will have the vendors come in and say yes, it is off the shelf; we are going to get it off-the-shelf; we know what you want. But then when you look down into the details of the contract, it is kind of open-ended; it is cost-plus. That is a sure give away nine times out of ten.

Senator SHELBY. That is suicide for the appropriators, too, because if we do not know what things are going to cost, how do we watch the money?

Senator Murray.

#### F&E

Senator MURRAY. Thank you, Mr. Chairman.

Ms. Blakey, the budget request for the FAA's Facilities and Equipment account is nearly \$400 million below last year's level and represents the largest cut in the entire Department of Transportation budget. In fact, when you look at the Bush Administration's multi-year budget, it says that the funding for air traffic con-

trol modernization will be \$2 billion lower than the amount authorized in the Vision-100 bill.

When Secretary Mineta came before our subcommittee a couple of weeks ago, he explained those cuts by saying there was a need to reevaluate those programs from a priority perspective. Since your 2005 budget reduced by more than 50 percent programs that were designed to prevent runway incursions and improve air-to-ground communications, should we assume that those goals are no longer a priority for the FAA?

#### SAFETY AND CAPACITY

Ms. BLAKEY. No, those goals are absolutely in place. We are going to work very hard to make certain that we address our overall safety goals and capacity. I would tell you that this budget supports our safety and capacity goals. It is something that we are going to as we move forward to make certain that we support core programs that are delivered in those areas. This budget does that.

It is true we are not in expansive times. Looking at the Aviation Trust Fund and looking at other constraints, we are dealing with an industry that is not able to equip like we had at one point hoped and expected. Things have changed. But the commitments that we have made in our capital account go to capitalizing on those programs, which at this point, the research and development is done. We are at the implementation stage. We do need to move ahead with them. And those programs that really are R&D, they are not ready for implementation and the huge costs that go with implementation. That is what we have tried to recognize here.

Senator MURRAY. Just last week the FAA's air traffic control infrastructure experienced a power outage in Los Angeles and a computer crash in Kansas. In Los Angeles, they said that it took nearly 3 hours to get all the communication systems back on line. Eighty flights were delayed. Two airplanes violated FAA's safety standards by flying too close together. And in Kansas, FAA technicians in the operations control center and the field were left unable to electronically communicate with each other for almost 12 hours. Can you assure us that this is not a preview of what we can expect to see with the \$400 million cut to the air traffic control modernization budget?

#### NETWORK OF SYSTEMS

Ms. BLAKEY. You know, the FAA does a remarkably good job at keeping on line a huge network of systems. So every now and then something occurs and the news media made a good bit out of something that actually was not as severe as the papers characterized it in terms of Los Angeles. It does catch people's attention.

But I would have to tell you that our ongoing ability to maintain and support our existing systems and network is a very high priority, and it is something that you will continue to see reflected in our budget.

Senator MURRAY. Mr. Mead, do you see any linkage between the overall funding level for modernization of the ATC system and the frequency of system crashes and other ATC outages like I just mentioned?

Mr. MEAD. No, I do not think I do. That is because if you look back about 3 or 4 years, these outages were much more frequent. We were reading about them almost every week and they were all over the country. Actually the trend line shows that they are getting better. But when they happen you wonder why did they happen and how can we get the recovery back as quickly as possible?

#### MAINTENANCE WORKFORCE

I would say that the maintenance workforce at FAA and how you are going to provide maintenance, I think that is an area that bears watching because the way the operations account is structured, much of the growth in it is going to cover the air traffic controllers, not much will go to maintenance technicians. Your salaries in that area have a crowd-out influence on other elements of that account and the maintenance technicians are one other element of the account.

Ms. BLAKEY. One thing I would say about this, and this really is a compliment to the vision of this committee and the Congress in general. The investments you have made in modernization have paid off in this area. We have seen a very significantly improved picture because the equipment is newer and much more reliable. It can be handled in many cases by remote maintenance, scheduled maintenance, which is obviously much more efficient than having to send folks out in the middle of the night on something that is a last-minute emergency. That really has made a very big difference, the fact that it is much more reliable, much more situationally situated where we can do it and do it well. So I think that we have to realize that the picture has changed. We are very committed to training our maintenance workforce not only for the challenges we have right now, but also to look at specific situations to make sure what happened here, what we are going to do to fix it to make sure it does not happen the next time. The second thing is we need to train people more for the upcoming systems, which are much more software-intensive, so that we have people who are well situated for the equipment of the future.

Senator MURRAY. Well, let me ask about maintenance, because on March 1 a Federal arbitrator ruled that the FAA has not met the minimum staffing levels needed for the agency's air traffic control maintenance functions based on the agreement that was reached in fiscal year 2000 between the FAA and the union that represents the airway facilities technicians. The arbitrator ruled that the FAA must immediately take action to raise the total number of technical employees to a minimum staffing level of 6,100. How was this allowed to happen and when was the last time the FAA met that staffing level of 6,100?

Senator STEVENS. Who made that ruling?

Senator MURRAY. A Federal arbitrator.

Ms. BLAKEY. This has been a longstanding difference of view between ourselves and PASS, our union. So we really do see that figure differently. We believe we have been meeting that 6,100. It all goes to a question of how you count some of our personnel and centers, and we believe they should be counted in that figure. That said, we are looking at the situation now as to whether we should

appeal this or whether we should take steps to increase the numbers there. This is a very recent ruling.

Senator MURRAY. It was March 1. So can you give us a time line of when you expect to move forward on that?

Ms. BLAKEY. I would be very happy to get back to you. I have not consulted with the folks who are actually working that arbitration, so let me find out and I will get back to you.

[The information follows:]

*Timeline to move forward on the March 1 ruling on staffing for air traffic control maintenance functions based on the fiscal year 2000 FAA/PASS agreement.*—The FAA has appealed the arbitration award that interpreted an agreement between FAA and PASS on systems maintenance staffing levels. The primary issue in the dispute was what specific positions should be counted towards the agreed on staffing number. FAA believes that the award is inconsistent with the Federal Service Labor-Management Relations Statute that governs labor relations in the Federal Government. The appeal acts as a stay of the award until the Federal Labor Relations Authority (FLRA) issues a decision on the appeal. There is no fixed time for FLRA to issue a decision. The FAA will comply with whatever decision the FLRA issues. In the meantime, the FAA will continue to monitor maintenance staffing levels in accordance with resource constraints and operational needs.

#### CONTROLLER RETIREMENTS

Senator MURRAY. The issue of controller retirements is not a new one. I was dismayed last year when our conference committee was required to accept the House's proposal to reject the FAA's request for 328 more controllers. While the conference report did not provide the requested funding to grow the existing number of controllers, it certainly assumed that there would be money to hire replacements for the usual number of controllers that leave or retire over the course of a year.

Ms. Blakey, as I mentioned in my opening statement, the number of air traffic controllers at our 24 en route centers is 747 controllers or 10 percent below the level called for under the FAA's own staffing standard. That shortfall has worsened by almost 100 controllers in just the last year. In fact, all but four of the FAA's en route centers are below the staffing standard and some are below by as much as 30 percent. Is your agency promptly hiring enough controllers to replace the ones that are retiring or leaving the system?

Ms. BLAKEY. The picture on the number of controllers FAA has in terms of our staffing needs is complicated. It is important to know at the beginning that in point of fact, when you take our controller workforce as a whole, we are well above our staffing standard. Currently I can give you the figures. We have on board 15,428 controllers. The staffing standard calls for 15,136. The question is are they in the right places? We are talking about our centers. It is true that only one of our centers—and the way the staffing standard operates, it says that you should have a set number within plus or minus 10 percent, so there is a fair latitude there and that is because it is hard—they differ a lot—to get it exact. We are looking at some of the centers where we believe we need to address that. Oakland is one, for example. Oakland, though, is complicated because it has historically been hard to staff. It is not where a lot of people have wanted to go for a variety of reasons. So some of these have issues that are not so much a question of resources;

they are a question of trying to figure out how we bring people in who both want to be there and who qualify to be there. Now another indicator, besides these staffing standards, which are sort of mathematical formulas, if you will, about how many people we need—

Senator MURRAY. So you do not think those are good standards?

Ms. BLAKEY. They are a standard. Another way to look at it, though, is how is your overtime doing? Are you running excessive overtime? We are not running excessive overtime in our centers. So if you look at that as a measure you say well, they are obviously operating fairly well with the existing numbers of people they have on board.

I met with our facility representatives for NATCA about a week ago in Redondo Beach with the leadership of all the centers from a union standpoint and asked, "what do you see?" And one of the things they pointed out was let us take a look at the folks who are talking to air traffic, talking to airlines. We have a lot of folks in the centers who are doing other kinds of things. So we need to look at both right-sizing and duties. How are we doing? But I take your point that in some of our centers we should increase the staffing and we are working to do that.

Senator MURRAY. Mr. Mead, do you care to comment on this?

Mr. MEAD. I think it is fair to say that FAA probably needs to start hiring some number of controllers in anticipation of this bubble, so I think you have a point there. At the same time, these staffing standards—Congress or FAA directed the National Academy of Sciences some years ago to take a look at the staffing standards and the National Academy of Sciences did not have a lot of favorable things to say about the application of these standards down to the facility level.

So when you have a number of 15,000-odd controllers nationally, the real issue is where do you need them? Because you have 300 different places. We do not have one building where we send 15,000 controllers. That is why I think this is a problem that FAA shares with the controllers union. I think FAA needs to take a look at how long it is taking for their on-the-job training. I think they have to drill down to figure out where they think these vacancies are going to occur.

I think the controllers union, for its part, needs to agree to participate in a labor distribution system so you can tell why do we have these disparities between similar facilities with comparable traffic levels? How many hours is it reasonable to expect the controllers to spend on scope? So I think it is kind of a community problem here and we need to get on with solving it.

#### CONTROLLER RETIREMENTS

Ms. BLAKEY. Senator Murray, you had also mentioned the retirement bubble and your disappointment that we had not—and as you know, in last year's budget we asked for additional positions and the Congress as a whole said no, do some other things. Congress asked us to look at the age 56 retirement requirement, develop guidelines for waivers, and look at training. But a big part of the push was right-sizing our facilities, not having these significant

shifts between overstaffing and understaffing. So we are trying to do that.

The Inspector General mentioned the retirement bubble. We agree that this bubble is coming up. I did bring a chart with me that shows the FAA's predictions of retirements accompanied by what actually happened that year. You will see that so far we are spot on. I think that the Inspector General is correct in saying we would like to have a lot more granularity at each—

Senator MURRAY. Spot on? I am a little worried at where that graph is going.

Ms. BLAKEY. Well, as I say, there is no question about the fact that there is a significant retirement wave coming up. That said, we believe we are accurately predicting this wave. At this point we do think that one of the things we need, at the facility level, is to determine a more granular picture of who is retiring and when. But it is not easy to do, as you can appreciate.

Senator MURRAY. What is the training time for those?

Ms. BLAKEY. It differs. Two-and-a-half, in some cases up to about 5 years. It should not be running more than 5 years. But you also are able to bring in what we call developmental controllers, who can be productive and work much earlier than the 2½-year mark. That is for a fully certified controller on all the positions at the facility.

Mr. MEAD. The concern is that as those bars increase and you have more people in the system, more controllers that you just hire, if I hire a controller today, send him to school, gets out of school, that controller is not going to be controlling air traffic, so you are going to have a lot of trainees around the system. So the granularity point that the Administrator points to about these disparities between facilities cuts this way, too, that that granularity has to figure out how many can we afford to have in training because you cannot equally weight a trainee with a full performance level controller.

Senator MURRAY. My time is up, Mr. Chairman. Thank you very much.

Senator SHELBY. Senator Stevens.

Senator STEVENS. Thank you very much. First let me thank you, Administrator, for working with us on the Adak runway. It really has been necessary to have a transition there with the State ownership and the operational capability of that area has been enhanced by your willingness to maintain the runway lights during the transition period. I do thank you for that.

#### LASER RUNWAY LIGHTING

I would like to ask if you would ask your people to give us an update on the laser runway lighting proposal that is before you. I know it is still in some test phase but I do not know if most people understand that we have over 1,000 commercial runways, some that you have a function on and mostly State and just local support. But beyond that, we have a whole system of private runways, people landing on their homesteads or in terms of float planes, landing on lakes.

We have an enormous landing problem. That laser designation for safe use is something that holds great promise to us to cut costs

considerably with regard to those and I would urge you to see what we can do to accelerate the application of that.

[The information follows:]

A demonstration of the use of yellow lasers to highlight hold lines was conducted in November 2002 at Ted Stevens Anchorage International Airport. Using eye safe lasers, a single holding position line was illuminated for 2 weeks. Tilt switches prevented the laser projectors from projecting above the ground; no direct exposure was possible from the ground-based projection system.

The second (longer term) demonstration is planned for September 2004 in Fairbanks, Alaska. Improved solid-state yellow lasers will be used to illuminate a problem intersection on the Fairbanks Airport where snow and ice cover the painted hold line over half the year. The lasers that will be used in the Fairbanks demonstration have been viewed by the FAA Administrator in a demonstration during her August 2003 trip to Alaska and have been reviewed by the FAA Radiological Officer in September 2003. Further review will include the Society of Automotive Engineers G-10T Committee that creates recommendations for limiting the use of lasers in airport environments.

If the second demonstration proves operationally successful, the laser technology will need to meet the requirements of FAA regulations and Certification as well as FAA airports to ensure proper National Airspace integration and eligibility for Airport Improvement Program funding. Final review of physiological safety will be provided by the FAA Civil Aerospace Medical Institute. Their concurrence is a necessary element in the decision on suitability.

Senator STEVENS. Secondly, though, I want to congratulate the two of you, Mr. Mead and Ms. Blakey. I note that there's a little more indication of contemporaneous review and comment in your department. I have always believed that the staff of the Inspector General has a responsibility for preventing problems, as well as critiquing the results of problems, and you sound like you have a little bit more communication than you have had in the past and we applaud that. I do hope that it continues to develop because this is a good problem.

#### CAREER STAFFING PROBLEM

I would like to show you sometime the chart for the Library of Congress. You think you have problems; this is a problem for the whole government and it comes about because of people deciding to make a career out of government. As the pay increased and as retirement benefits increased, as the health care increased, more people are staying in government now than ever before for longer periods of time. As a consequence, this is a national problem, not just yours.

It requires some real help, Mr. Mead, from the inspector generals to start looking at how we can utilize some of the funds that are available.

And Ms. Blakey, I do believe inspector generals can step out of the box a little bit. They do not have the long-term and political responsibility that you might have but they have the capability with their staffs to try to see around corners and see how collisions could be avoided. As I said, I applaud you. It seems like you are doing more of that, from the conversations I have heard.

#### TRAINING OF NEW CONTROLLERS

I do want to ask you a little bit about this problem of dealing with the movement of new people into full controller status. It seems to me that that has got to be accelerated. Have you looked at that, Mr. Mead? How do you accelerate the time in which a per-



son is really qualified to take the position of the well qualified controllers that are going to leave?

Mr. MEAD. We looked at this. You will remember, Senator Stevens, some years ago FAA's academy in Oklahoma City used to have—they say if you look to your left, look to your right, two of you will not be there; you will not pass. And FAA corrected that.

Senator STEVENS. That is what they said when I went to law school.

Mr. MEAD. Same here.

Senator STEVENS. They were right.

Mr. MEAD. I think we need to take a look at that. We are about to issue a report. FAA has it and I think you are quite right about the extent that we communicate but—

Senator STEVENS. We tried in Alaska to reach down into the university and have the universities start training these people and as they came through their college training, they were prepared to move in and be ahead of those who might have just walked off the street and said I would like to be an air traffic controller.

I think we have a duty to reach down into the educational process across government and say we want some of these institutions to start training people more specifically for the work that they may be able to fulfill for the government. If we do not do something, you cannot train them post-college and meet the goals of that chart or the Library of Congress or, for that matter, take a look at the military departments. They probably have the worst one of all right now.

Mr. MEAD. FAA is using the university system. They used to never use it. I do think you are right on target. I do not recall whether you were in the room at the time of the statistic I mentioned. It takes an average of 3 years after they get out of school before they are at the full performance, fully certified level and we found some instances, Senator Stevens, where it took up to 7 years.

Senator STEVENS. I just read that. It is on page 7 of your report. I understand what you are saying but I do not think the solution is to critique it as it is happening. I think we have to find a solution in advance of the problem and it has to be—maybe we should create—right after World War II we created special schools. We authorized people to form special schools for training of our professions and various jobs for government. Have we got enough capability in the colleges to do this? Have you examined into that? How many colleges are willing to participate?

Mr. MEAD. No, we have not.

Ms. BLAKEY. We have quite a few and certainly when I was in Anchorage I was very impressed by the university's simulation lab they had for air traffic controllers. I thought that was a great thing, that they are actually beginning training that is going to certainly feed into our system.

Senator STEVENS. Have you seen our interdisciplinary training, Mr. Mead, in Alaska? Have you seen what we are doing?

Mr. MEAD. No, I have not.

Senator STEVENS. We do not have taxis outside of the two or three major cities. We do not have buses. We do not have trains, only one train. We have fewer highways in the whole State of Alaska, which is one-fifth the size of the United States, than King

County, Washington has. But we depend on airplanes and we are using our system as sort of an incubator for new ideas to deal with that need. We are always going to be dependent upon airplanes because the Congress in its wisdom withdrew a lot of Alaska this way and that way. We cannot have north and south roads. We cannot have east-west roads. We are linked to aviation forever. So I would urge you to come up. As a matter of fact, I might take you fishing if you want to come up.

Mr. MEAD. I will take you up on that.

Senator STEVENS. Ms. Blakey is a damn good fisherman. She finds occasion to come up at the right time of the year, which is a very intelligent use of the taxpayers' money as far as I am concerned.

Mr. MEAD. I will take you up on that, sir.

Senator STEVENS. Well, I congratulate you very much and I appreciate that this is a sea change, even for you. I remember sitting here when you were mostly critical. I like the fact that you are now mostly analytical—where we are going and what is causing the problems as we proceed along this path. That is a good partnership you have there, Ms. Blakey. You are part of it, too, and I congratulate you very much.

Thank you, Mr. Chairman.

#### REVIEW OF BUSINESS CASE ANALYSIS

Senator SHELBY. Thank you, Chairman Stevens.

Madam Administrator, as a major acquisition program experiences cost growth or schedule delays or capability reduction, does your agency review and update the business case analysis and how often?

Ms. BLAKEY. We do. We have a variety of mechanisms in which we do a close analysis, in fact, of our major acquisition programs. I can tell you that—

Senator SHELBY. How do you validate the assumptions and conclusions in these analyses? What method do you use? Is the Inspector General aware of them?

Ms. BLAKEY. I think he is aware of a lot of them. I will tell you, we have relied very significantly on some independent analysis that has certainly helped us out. For example, on our baselining of our STARS program and what we can expect there, we asked Mitre to take a look at all of the cost assumptions, to really go through the business case and to provide us with an independent analysis because we felt that was important. We are going to be doing more of that as time goes on because I think it does help to have someone who is not as connected with these programs and who has frankly more financial and economic horsepower to do it.

But we do have a Joint Resources Council that meets and has to approve these. I am told when there is any significant variance off of the projected schedule, and the projected cost. We are monitoring that—it depends on what level you are talking about—on a weekly to monthly basis and anything that begins to deviate immediately throws up a major red flag. It does not always fix it when we see the red flag, but we know at that point we have a problem.

Senator SHELBY. Was the process you are referring to applied uniformly to determine whether to continue funding programs with major problems—that is, WAAS, STARS, ATOP, and so forth?

Ms. BLAKEY. I cannot speak historically because, as you know, I have been at the FAA—

Senator SHELBY. Could you get back with us on that?

Ms. BLAKEY. I would be happy to and I certainly will give you more detail on exactly how we are applying this for the current programs.

[The information follows:]

Yes. The FAA has incorporated a series of management control processes and tools to improve reporting and evaluation of costs, schedule, and technical performance for major acquisition programs. Internal processes used to monitor acquisition programs and inform senior management include:

Monthly reporting by program offices of baseline status and variance using an automated desktop tool called Simplified Program Information Reporting and Evaluation (SPIRE).

Monthly reporting to the Air Traffic Services Board on cost, schedule, requirements stability, and earned value status.

Quarterly reporting to the Joint Resource Council (JRC) members on the status of all baselined programs.

Administrator notification whenever variances to baseline parameters exceed 10 percent.

Semi-annual acquisition reviews to examine programs progress and issues towards completion of acquisition goals including cost, schedule, and performance. May be held more or less frequently as needed.

Public Law 104-264 gave the FAA Administrator the authority to terminate any acquisition program that breaches a baseline element by more than 50 percent. If the Administrator determines to continue the program, this determination must be provided to Congress. Public Law 104-264 also authorized the FAA Administrator to consider terminating any acquisition program that breaches its cost, schedule, or performance baseline by more than 10 percent.

Mr. MEAD. A problem has developed here and I could use STARS as an example. It has been a fiction for some time, probably for nearly 3 years running, where the costs of this program were represented to be around \$1.69 billion. People inside FAA knew that that figure was not realistic for what the program was supposed to do and time marched on. A big change from this time last year is that FAA is putting a can opener on all these major programs. I think STARS was one of the first because that is some decisions that need to be made on in the very near future. So it takes a while but I can assure you that there is a recognition inside FAA that this list of programs, that the baseline estimates need to be revisited and that process is ongoing. I am very encouraged.

#### OCEANIC AIR TRAFFIC CONTRACTOR COST

Senator SHELBY. Administrator Blakey, in 2001 the FAA awarded a fixed-price contract of \$218 million to develop a replacement system to control oceanic air traffic. As a result of the contract, the contractors had to bear software development cost overruns. This has been touted as a new approach for managing contracts at the FAA.

I have learned that FAA recently agreed to pay the contractor \$11 million for work it was already contractually bound to perform and FAA agreed that taxpayers would bear all future cost overruns after February 2005. How do you justify this \$11 million for work that the contractor was already obligated to perform?

Ms. BLAKEY. Well, this is exactly the dilemma you get into with a fixed-price contract because the contractor in this regard, Lockheed-Martin, had sunk considerable costs for unanticipated problems in terms of software development and technology development. Again you are going where no one has gone, and they bore a lot of those costs. It is very critical that we field our oceanic technology in the very near future. In fact, we expect to see our system in Oakland go live in June.

We could not let those schedules just go way out because the contractor was in the red and no longer making money and the schedules were slipping. It is in the taxpayers' best interest to address the issues and the problems. We felt it was equitable to go ahead and fund, in this case another \$11 million, on the contract to bring it in in a timely fashion and get service going.

There are competing providers out there for oceanic air traffic. We believe we are doing an excellent job and have the best system, but we need to field that system.

Mr. MEAD. Mr. Chairman—

Senator SHELBY. Do you agree with that?

Mr. MEAD. Largely. If it stops at \$10 million, that certainly is dwarfed by some of these \$900 million increases in these other programs. So if it stops there, I think that is fairly modest and we could almost—

Senator SHELBY. It is still a lot of money to us.

Mr. MEAD. It is. The big date to watch is February 28 because after February 28, 2005, FAA has basically agreed to pay for any problems that are identified. So they had better make sure they identify all the problems before February 28, 2005 or that \$11 million figure will go up.

Senator SHELBY. It could be a huge underwriting mistake.

Mr. MEAD. That is right.

#### LABOR DISTRIBUTION

Senator SHELBY. Regarding labor distribution, CRU-X was supposed to be a system that would allow FAA to accrue credible workforce data about controller staffing, overtime cost, and workload issues. Madam Administrator, why has not this system been employed as designed and why was the functionality of it limited?

Ms. BLAKEY. The system initially was developed in a very collaborative fashion with our workforce and with NATCA. We do believe that the functionality that it has is going to be very useful to the FAA. There has been a dispute over the specific detail that the system collects in terms of the duties and hours that are being spent on them, and we have been in negotiations with NATCA over this. We would like to bring those negotiations to an end. We would like to fill all of the functionality of the system. We are working very hard to do it. This is a matter, though, that is subject to negotiation with our union, and we are working through it at this point.

Senator SHELBY. Mr. Mead.

Mr. MEAD. I have a suggestion for you. What the Administrator says is correct but these negotiations have dragged on and on and on. Senator Murray pointed out how important—

Senator SHELBY. Negotiations generally bring more costs, do they not?

Mr. MEAD. Yes, they do. Senator Murray pointed out the controller retirement bubble. This is the part that controllers need to help us with because this will give you a sense of where they need the people and why you have disparities between facilities that handle similarly complex levels of traffic.

The suggestion I have is that we make any increases in staff to be done on the condition that we get a labor distribution system in place because that will be a central issue for us for the next 8 or 9 years. You are going to be facing increases in the controller workforce and you are going to want to know where and when they are needed and a system like this would help measurably in that task.

#### ACCOUNTABILITY

Senator SHELBY. Bringing more accountability to FAA is a top priority of this committee—it has to be—and we are pleased to see that the FAA now has a chief operating officer whom you introduced, Mr. Russ Chew. The transition to a performance-based organization called the Air Traffic Organization, while it is not complete, may also be a step forward if implemented correctly. It has to be implemented correctly. What additional steps are you taking to bring more accountability to FAA? And how long will it take to change the agency's culture? First you, Ms. Blakey, and then Mr. Mead.

Ms. BLAKEY. Well, I will tell you. I think that culture change is a multi-year activity. It will not happen overnight, but I am pleased to say that Russ Chew and his team are moving with remarkable speed. They have already worked to flatten our management layers so that we bring headquarters much closer to the field and have much fewer people in that interface of our management bureaucracy.

They have also instituted an activity value analysis, which I think is going to be remarkably interesting. I look forward to sharing the results with this committee because essentially what we are doing is having Booz Allen Hamilton help us go out and analyze what exactly are the services we are producing at the individual levels of the organization and are they important? Are they being well done? Do our customers value them? And as a result of that, we will be able to determine much better what are the activities that we can do without, what are areas that we should be doing more of, and therefore have our resources, both personnel and others, devoted to where we are getting the value. So that process is ongoing. We expect to have the first results of it by June. We will certainly be looking at that as a way to make this work more efficiently.

Senator SHELBY. Mr. Mead.

Mr. MEAD. I think there are already some early signs that the direction is changing in making the ATO a performance-based organization. I think the proof will be in the pudding and it is probably 2 or 3 years down the road. I think at this time next year—

Senator SHELBY. Two or 3 years will be here before we know it, though.

Mr. MEAD. Yes, sir, it will be.

Senator SHELBY. I know from being on this committee.

Mr. MEAD. I think the big barometers right now are how we handle the workforce issues involving the air traffic controller retirements, STARS, getting our terminal modernization on the right track, and this big acquisition they are just starting called ERAM.

Another big-ticket item, although compared to billion-dollar systems is not that big financially, is that oceanic air traffic control system. Some big dates are coming up this year on that in June. It is supposed to be in Oakland. That program is already late. I think they are paying a lot of attention to it. So it takes a while to turn around the ship. I will withhold judgment until I see the pudding.

#### FLIGHT DELAYS

Senator SHELBY. You know, the summer months are coming on us fast here. The air traffic is probably going to rebound as people start traveling more; we hope so. What are the top three or four actions that you are taking that will help meet the growing demand for air travel and prevent gridlock during the busy summer travel season?

Ms. BLAKEY. Well, certainly we have been looking at the question of what we can do very immediately to relieve congestion. The conference I mentioned in March really was a ground-breaking activity where we asked everyone to sit down in the same room and say now look, for the good of the system, not just a single airport or parochial interest of an airline, how can we make the system work more efficiently? And we came out with a number of procedural changes which we have already begun implementing in the way we are looking at the upper level air space and the way we are establishing express lanes.

The agreement is that if we are experiencing 90 minutes or more in taxi-out and hold at airports, we can start flushing those airports and asking others to hold back. Let us get the delay out of wherever we have it so that it does not overwhelm, not only the passengers in those places that are congested, but also begin to ripple through the entire system.

Just yesterday Secretary Mineta and I took specific steps to deal with O'Hare, which I do not have to tell this subcommittee O'Hare has a huge effect on the system. We had realized back in the fall that the scheduling at O'Hare was beyond the capacity of the airport. You know, 2 pounds in a 1-pound bag does not work. Therefore, we began in the winter, early part of this year to talk with the two airlines which are the primary airlines at O'Hare, American and United, about drawing down their schedule. They drew it down 5 percent in the critical hours between 1 p.m. and 8 p.m. We tried to see if that was going to be enough during the month of March. It proved that it was not enough. We still were experiencing significant delays at O'Hare and again this ripples through the whole system. You know, if O'Hare sneezes everybody gets a cold. So we then asked again that the airlines look at their schedules and yes, just yesterday the Secretary and I announced an agreement that each airline is going to take down their schedule further, American and United, another 2.5 percent at O'Hare.

Now this is not something we like. We certainly would prefer that the market work and not have to put any constraints, but

these are voluntary measures. We are very much looking at this to make sure that we are doing everything possible to address schedules and delays.

Senator SHELBY. Mr. Mead.

Mr. MEAD. We all remember the summer of 2000. Everybody talks about the summer of 2000. That is a reference to the worst gridlock year. I think we all remember that. Two big things are different, maybe three things are different now. There are more runways out there.

In the summer of 2000 and the aftermath there was extreme reluctance for the regulatory authorities to put the brakes on airline scheduling practices. You remember we had all kinds of examples where you had more aircraft leaving at a specific time of day than could possibly leave and Chicago O'Hare was one of the poster children for that. I think that the Secretary and the Administrator have shown a willingness to tackle that issue.

Secondly, one of the things that we learned from the summer of 2000 was the need for the airlines and FAA to talk to each other on a daily basis, in the morning, about what things were looking like that day from the standpoint of weather or flight patterns, and so forth. So that is different.

Another fact that I think is a little bit scary that we have not had a lot of experience with is the regional jet growth, which carry less passengers. As traffic rebounds and—

Senator SHELBY. Less traffic and fewer passengers.

Mr. MEAD. Yes, and I mentioned Dulles. I think we see some danger signs at Dulles for this summer. I mean it is a huge growth balloon if you believe the airlines about what is going to happen and I think right now is the time to start planning for that.

Senator SHELBY. Senator Murray, thanks for your patience.

#### SAFETY

Senator MURRAY. Thank you, Mr. Chairman.

Mr. Mead, in the area of safety, a continuing concern is the fact that the aviation industry is out-sourcing an increasing percentage of their aircraft maintenance work. In fact, almost half of their maintenance costs were out-sourced in 2002. The US Airways Express crash in Charlotte last year I think is a tragic example of what happens when there are performance deficiencies on the part of third-party maintenance contractors.

When your office looked into this issue last year you reported that the FAA's inspection efforts were primarily focused on in-house maintenance programs. The FAA agreed to develop a program to target inspector resources toward the out-sourced facilities. In your view how well is the FAA now targeting those facilities?

Mr. MEAD. We need to do a follow-up effort. Let me give you a good answer to that question. I can tell you what I have been told is that they are in the process of implementing our recommendations. For example, the problem you alluded to was where United Airlines' principal inspector would not know much about what was going on at the repair stations and there is all this maintenance being done at this repair station and the repair station person would not know what was going on inside of United Airlines, just to use the one airline as an example.

FAA is piloting a process with one airline—I think it is Delta—where the principal maintenance inspector for Delta is expected to be on top of all of their maintenance. That is, I think, the essential design of their program. I think FAA is impressed with the results of that and wants to consider expanding it to the other carriers. I think that is the current status.

On the foreign repair stations, FAA agreed that they needed to step up their oversight there. You will recall that the problem we identified there was FAA would certificate the repair station but not necessarily know—they would delegate a lot of the oversight responsibility. We have not followed up to check to see how that was implemented. Maybe the Administrator is more current than I am on that.

Senator MURRAY. Ms. Blakey.

Ms. BLAKEY. Well, certainly we have just instituted, in fact, new rules, new regulations governing repair stations across the board, both foreign and domestic. We have evened out much more so the requirements that we are placing on foreign repair stations are equivalent to those in the United States except that they must be recertificated every 1 to 2 years. So I think at this point from that standpoint we are working very hard to make sure that those requirements, for example for FAA-certified training, et cetera, will be carried through.

The second thing is we are adapting our own oversight, just as the Inspector General pointed out, and we are working with the carriers so that they see the integration of oversight of repair work—

Senator MURRAY. Can you give us any specific examples?

Ms. BLAKEY. I can probably do that better in a written response to the committee if you would like, just to give you more detail on that.

Senator MURRAY. All right.

Ms. BLAKEY. But Mr. Mead is correct. We are very encouraged by the fact that the inspectors should look at this as a unit for a carrier, not as we look at these repair stations who are doing six carriers and over here we are only focusing on what Delta does in-house.

Mr. MEAD. I think just a footnote to this, I think the domestic situation is easier to fix than the foreign situation. In the foreign situation, we found cases where the FAA person that was supposed to certificate was presented with materials that were in a foreign language that he or she did not understand. So the problems in foreign repair stations and the FAA oversight I think are of a different type and maybe a bit deeper.

Senator MURRAY. Well, if both of you could follow up with the committee in response to that, I would appreciate it. It remains a significant concern.

[The information follows:]

The FAA has taken numerous actions to address changes in repair station oversight. Many of these actions address concerns raised by the OIG in the Air Carriers Use of Repair Stations audit published in June 2003.

In October 2003, FAA formed working groups to respond specifically to the OIG report. This working group will:

- Identify repair stations that perform safety critical repairs for air carriers;
- Improve databases to capture results of foreign aviation authority inspections;



- Develop new comprehensive repair station oversight organizations and concepts to oversee aviation article repairs from start to finish.
- FAA increased the sampling inspections performed by FAA inspectors for inspections performed by foreign aviation authorities on FAA requirements.
- Implemented the final Part 145 rule on Repair Stations (January 2004).
- In collaboration with Duncan Aviation and TIMCO, the FAA is initiating a prototype program to develop new oversight systems and techniques to oversee large, complex repair stations. This system will:
  - Standardize FAA oversight of repair stations located in multiple FAA regions;
  - Increase the quality of surveillance by assigning a dedicated team of inspectors experienced and knowledgeable in the practices and procedure of the repair station;
  - Increase the quality of surveillance by allowing inspectors to retarget their oversight to areas of risk.
- On going efforts in changing foreign and domestic repair station oversight:
  - Enhance the FAA inspector repair station certification and surveillance course and give priority to inspectors assigned oversight responsibilities for repair stations. (Must be done to comply with the requirement of new rule).—June 2004.
  - Develop a repair station prototype program that incorporates a certificate management team structure to enhance oversight of large repair stations or companies that own multiple repair stations and satellite repair stations.—October 2004.
  - Develop and publish a notice of proposed rulemaking that revises the rating system, adds a quality assurance requirement, and further clarifies rule language.—October 2004.
  - Develop the 145 Surveillance and Evaluation Program by revising the Surveillance and Evaluation Assessment Tool to target identified risks and incorporates the system safety approach into repair station oversight.—October 2006.
- The fiscal year 2004 activities are focused on developing new processes and procedures to identify risks and target FAA inspector resources to resolve those risks. The completion of these activities and implementation of the new programs will not be accomplished until the fiscal year 2007 timeframe.

Senator MURRAY. Ms. Blakey, as you will recall, the only reason the conference report on the FAA bill was allowed to pass the Senate and go to the President was because you provided a letter to the Senate Commerce Committee promising that you would not contract out any additional air traffic control functions to the private sector during fiscal year 2004. This could very well become a contentious issue for our bill this year if we do not have a similar commitment from you for fiscal year 2005. Are you prepared to submit to this subcommittee at this time that the FAA will not be contracting out any current air traffic control jobs during 2005?

Ms. BLAKEY. You know, the letter that you are referring to was one that was prompted, as you say, by what, to me, was a surprisingly intense debate over this issue of contracting out, out-sourcing, privatization, all sorts of things being battled about. And it did prove important to have the debate set aside and be able to get what was a very important 4-year reauthorization bill completed.

I think it is a very different thing, though, if you are suggesting that on an annual basis the FAA Administrator should provide a guarantee that there would not be any kind of out-sourcing for the following year. Historically, since the FAA has been here, that has never been done. It has never been necessary, and I do not understand that there is a necessity for it now. And the reason I say that is I have already said and I have said repeatedly that on the issue of our contract towers that we have no intention of converting further towers any time in the foreseeable future. There are no plans on the table. I have no additional A-76 plans for studies right now. We do, however, have an important A-76 study under way, which this subcommittee is very well aware of, focusing on our flight serv-

ice stations. As you know, we have the Inspector General's report and recommendation and that of others. We have looked at the question of can this be done by the private sector. And, in point of fact, everything points to the fact that this is an important area to have looked at from the standpoint of "Can private or public sector accomplish this best?"

No matter whether our own employees, who are bidding in this process, no matter whether they win or whether others win, we know that we will have very considerable cost savings to the taxpayers, about a half billion dollars over a 5-year period. We also know we will have better service at the end of this. So that is important and we expect to award that contract in fiscal year 2005.

So I mention those things by way of saying that it would seem both unnecessary and an impediment to the kind of flexibility that may be important down the road if all of a sudden there becomes some annual expectation that guarantees have to be provided.

#### SEATAC

Senator MURRAY. I do know what the annual expectation is. I can just tell you it will be an issue this year.

Let me turn to another topic. Ms. Blakey, your testimony does mention that last year was what you called a banner year for new runways. It will not surprise you when I tell you it was not a banner year for SeaTac International Airport's third runway project. Unfortunately, as you well know, SeaTac is kind of the poster child project for the need to streamline the environmental review process for new runways. And, as you know, we have been trying to complete construction of the third runway I think it is for my entire life but it has only been 16 years.

The added costs for complying with those environmental rules for the construction of that runway, as well as the associated cost of delays for a great deal of time now, have grown by almost \$200 million just in the last 4 years. As you can well imagine, this has put an incredible amount of pressure on the ability of the airport authority to finance the completion of that project. The Port of Seattle, as you know, is currently pursuing an amendment to the airport's existing Federal commitment to ensure that there is adequate financing to meet all of those new environmental costs. Do you believe it is reasonable for us to pursue an additional Federal commitment for this project, given the fact that these added costs are associated with the need to comply with Federal environmental laws?

Ms. BLAKEY. Although I have not been as long on this project as you have, I do share your frustration about it. We see the third runway at SeaTac as being a very important part of the national aviation system. So successful completion of that runway is a big goal for all of us. No question about it.

What we are doing right now, because I think this is the most intelligent thing from our standpoint, is we have hired again an independent contractor to look at the financials that SeaTac has provided. As you know, they came in only a month or so ago, but we are trying to get through this very quickly. It is a very complicated analysis, but we need to understand a variety of the cost justification there, as well as things like what will that do for the

cost per enplaned passenger, what will be the impact on the airlines, et cetera?

What I can definitely tell you is that we are committed to working through that. We will be as supportive of SeaTac as is possible, with the understanding that this is an unprecedented request. A request of this magnitude and taking up the Federal share to the degree this would, it certainly raises policy issues as well as understanding the financial needs.

Senator MURRAY. Well, I appreciate that very much and want to work with you on that. Do you have any sense of the time line that we will be getting a response back?

Ms. BLAKEY. Boy, I would like this get this done by sometime in June. I will keep you posted, if I might.

Senator MURRAY. Thank you very much.

Ms. BLAKEY. And by the way, congratulations on the commissioning of the tower. I know that is coming up on the 24th and cutting that ribbon will be great.

[The information follows:]

The FAA timeline to reach a decision on the SeaTac application to increase the LOI by \$198.1 million follows:

March 8, 2004.—Application received.

May 19, 2004.—FAA receives the independent financial analysis from Reed & Associates, LLC.

May 30, 2004.—Complete agency financial analysis and review of the application.

Mid-June 2004.—Final agency decision on the application.

Senator MURRAY. Good. One other question, Mr. Chairman, and I know we have a vote coming up.

Ms. Blakey, in my opening statement I talked about how essential it is that the United States maintain its international leadership in aviation for the second century of flight. Part of my dismay over the proposal to cut \$400 million from your procurement budget is that it will slow down our ability to modernize the current air traffic control system. Beyond just replacing the aging equipment that your agency is operating on today, we have to be thinking about the next generation of air traffic control equipment and begin planning for deployment of that system.

#### GLOBAL COMMUNICATION, NAVIGATION, AND SURVEILLANCE SYSTEMS

As you know, for the past couple of years, I have secured about \$45 million for the Global Communication, Navigation and Surveillance Systems program and I am very pleased that the first phase of that contract was awarded to the Air Traffic Management division at Boeing. And I really want to commend you for extending their contract so they can stay on the job until you have awarded the phase two contract portion of that. What can you tell this committee about the accomplishments of that initiative to date?

Ms. BLAKEY. Well, I think in terms of satellite navigation and the way we see our system developing over time, certainly the program has given us important information about how satellite navigation can function, particularly in areas like the Gulf where you really do not have radar control and you have therefore big challenges involved. It also points in the direction of what we will do from the standpoint of digital communications, what we will do from the standpoint of looking at investments internationally be-

cause we do see this as being the wave of the future. So we are still both analyzing the results and, of course, looking at what is proposed for the next stage as a part of a contract extension. I think the results so far have certainly been promising.

Senator MURRAY. Is there any doubt in your mind that the next generation of air traffic control will be satellite-based?

Ms. BLAKEY. No. It certainly will be heavily satellite-based; let me put it that way. And we are very much of the view that our standing internationally is going to depend on continuing U.S. leadership in that regard.

#### ADDITIONAL COMMITTEE QUESTIONS

Senator MURRAY. Well, we want to be there.

Thank you very much, both of you, and thank you, Mr. Chairman.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing.]

#### QUESTIONS SUBMITTED TO THE FEDERAL AVIATION ADMINISTRATION

##### QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

##### FAA ACQUISITION POLICY

*Question.* Earlier in the hearing, I asked if FAA reviews and updates accordingly the business case analysis if a major acquisition program experiences cost growth or schedule delays, or capacity reductions. How does the FAA validate the assumptions and conclusions in such analyses?

*Answer.* Under the FAA's acquisition policy, the program office is responsible for preparing cost, schedule and performance estimates for review when these commitments change. Before approval by the Joint Resources Council, the Office of Operations Planning and Finance is responsible for business case analysis, and reviews the revised estimates. The reviews include an audit of the estimates and examination of the underlying ground rules, assumptions and models. Reviewers determine differences between revised estimates and previous estimates. The reviewers use historical results from similar FAA programs, other government programs, and industry to validate the estimates. In some instances, the reviewing division may develop their own estimates for comparison purposes. Risk assessments are usually performed. Together with program office analysts, the reviewers ensure that estimates are adjusted to account for risks, risk mitigation strategies and uncertainties. An opinion is made available for consideration during Joint Resources Council deliberations and decisions.

*Question.* What process does the FAA use to determine whether to accelerate, maintain, decelerate or terminate an ongoing program?

*Answer.* FAA acquisition policy requires cost, schedule and performance baselines for each major acquisition program at the time of initial program approval by the Joint Resources Council. If baselines are breached, revised baselines are subject to review and approval by the Joint Resources Council, revisiting the rationale for continuing the program and the terms under which the program may proceed. The Administrator reviews programs that exceed their baseline by more than 10 percent.

Under the Air Traffic Organization (ATO), performance is defined in terms of service delivery targets and published in the FAA Flight Plan and upcoming ATO Business Plan. Decisions to accelerate, maintain, decelerate or terminate an ongoing program will be based on its contribution to meeting service delivery targets and business objectives, such as targets for reduced operating costs. The ATO reviews the costs and benefits of programs to ensure there is an economic return on the capital investment.

##### ADVANCED TECHNOLOGIES AND OCEANIC PROCEDURES

*Question.* When and at what cost can we expect to have fully functional ATOP systems replace the obsolete technology in Anchorage, New York, and Oakland Centers?

Answer. The approved acquisition program baseline for the Advanced Technologies and Oceanic Procedures (ATOP) system calls for Build 1 to achieve Initial Operational Capability (IOC) at Oakland Center in June 2004 (which occurred on June 30), at New York Center in March 2005, and Build 2 IOC at Anchorage Center in March 2006, with the final ATOP system IOC in 2008. The FAA is working toward a more aggressive schedule with contract incentives to deliver Build 1 IOC at New York Center in December 2004 and Build 2 at Anchorage Center in May 2005. Build 1 delivers a fully operational ATOP system with integrated decision making tools, enabling “off-the-glass” operations and providing the flexibility needed to entertain more requests for in-flight altitude changes. Build 2 delivers integrated radar data processing functionality and the enhanced conflict probe required to reduce aircraft separation from 100 nautical miles to 30 nautical miles. The total Facilities and Equipment cost of the program is \$548.2 million.

#### STANDARD TERMINAL AUTOMATION REPLACEMENT SYSTEM

*Question.* It seems as if the Standard Terminal Automated Replacement System (STARS) procurement is through the most difficult phase of the procurement cycle and your testimony indicates that the anticipated resources for this program will decline in the coming years. How do you compare the relative risk remaining in the program compared to other major FAA programs such as WAAS, ASR-11, or ERAM?

Answer. The STARS program has completed core baseline development and is well into the production, deployment, and sustainment phase. As of May 26, 2004, 21 STARS sites are fully operational in the National Airspace System, along with 15 separately funded systems operating at DOD military (Air Force, Army, and Navy) installations worldwide. All operational STARS systems have exceeded their requirements for system reliability and availability.

The remaining STARS risks are primarily programmatic and budgetary. The FAA Joint Resources Council (JRC) recently approved STARS for full production and deployment to the remaining 31 of its 50 most critical terminal locations as part of Phase I of the Terminal Automation Modernization Program.

When compared to Wide Area Augmentation System (WAAS), Airport Surveillance Radar—Model 11 (ASR-11), and En Route Automation Modernization (ERAM), STARS is in the lower risk phase of the standard program life cycle. The life cycle starts with high risk during the development phase, decreases through deployment, is at lowest risk during the years of sustainment, and eventually increases during the end of life phase prior to replacement. STARS is deploying full production configuration systems and sustaining those systems. ERAM is in the higher risk area of development while WAAS and ASR-11 are nearing the end of development.

#### GLOBAL POSITIONING SYSTEM

*Question.* It is my understanding that the Department of Defense appears to be increasing their requirement for Global Positioning System (GPS) IIF satellites. I am told that L5 signal coverage is on the horizon and that GPS accuracy will get even better than it already is. Given the difficulty that everyone anticipates for WAAS equipage, the accuracy improvement of the GPS system, and the success that GPS already enjoys in the general aviation and commercial fleets, I’m wondering what benefits we derive from continuing to pour more resources into WAAS when most, if not all, of the capability that WAAS offers is likely to be offered by this next generation of GPS satellites. Would we be better off focusing on how to leverage GPS in our Required Navigation Performance, or RNP, efforts and by taking advantage of the installed base of GPS receivers?

Answer. The Department of Defense is adding an additional civil frequency called L5 to the next generation of GPS satellites. This frequency will provide additional capability for all users of GPS and will enhance accuracy. WAAS presently achieves an accuracy of 1.5 to 2 meters.

WAAS receivers for aviation use are currently available by a limited number of manufacturers and we expect that over the next year this number will grow significantly. GPS provides significant benefits for pilots, and today many are taking advantage of the capabilities of GPS. However, GPS alone, even with the L5 signal, does not meet all the needs for our customers. Specifically, GPS alone does not meet aviation safety requirements to virtually never fail to warn pilots of misleading information and to be available all the time. Meeting these requirements improves safety while enhancing capacity within the National Airspace System (NAS). For this to occur, capability beyond GPS alone is needed, and WAAS meets this need. The WAAS will utilize the GPS L1 and L5 frequency to enable pilots to fly precision

approaches to Category I levels. Precision approach utilizing WAAS will be fully compatible with the FAA Required Navigation Performance. The WAAS program has recently undergone program re-planning to leverage the investment the Department of Defense is making to modernize GPS when it adds the L5 frequency.

There are three issues regarding the modernization of GPS by adding L5 that need to be addressed. The first is the schedule of when L5 will be available. Although the first L5 satellite is scheduled for launch in 2006, it will not begin broadcasting the L5 signal until 2009. In addition, in order to utilize the capability of the GPS constellation, many satellites with L5 must be operating. Based on the current schedule, it is possible that L5, with acceptable availability of its signal, will not be available until 2015 or later. WAAS is providing service to customers now. With the additional L5 frequency provided by GPS, WAAS capabilities will improve. The second issue is that even when modernization is completed, there may not be a sufficient number of satellites available to provide precision approach capability to all users, at all locations in the NAS. Analysis shows that the modernized GPS will still need to be augmented to provide service to all users, at all needed locations, at all times. The third issue is that current GPS receivers are not capable of receiving and processing the L5 signal. New equipment or upgrades to existing equipment will be necessary to receive and process the L5 signals.

FAA is committed to working with our customers to enable RNP capability. WAAS allows more aircraft to achieve the most stringent RNP by providing high capability RNP-capable receivers at modest costs available to all users. GPS alone cannot meet the most stringent RNP capabilities.

#### CONTROLLER RETIREMENTS

*Question.* How the controller workforce changes over the next several years will be a critical issue for the FAA. FAA has reduced staffing levels for air traffic controllers from 15,613 in fiscal year 2003 to 15,333 in fiscal years 2004 and 2005. And, FAA is not requesting additional controllers in fiscal year 2005. What is your plan for addressing the retirement surge?

*Answer.* Controller retirements are a critical issue for FAA. We are in the process of developing a plan to prepare the agency. We are also developing a plan to address controller retirements, as required by Vision-100, which will be submitted to Congress at the end of calendar year 2004.

#### CONTROLLERS-IN-CHARGE

*Question.* What are you doing about the practice of air traffic controllers acting as controllers-in-charge and the rising number of operational errors occurring under their watch?

*Answer.* To date we have not identified any direct correlation between the use of air traffic controllers acting as controllers-in-charge (CIC) and the number of operational errors. Following any operational error, the FAA conducts a detailed review of the circumstances surrounding the error to identify causal factors. The current data indicates that approximately 23 percent of the errors reported for fiscal year 2004 occurred while CIC's were on duty in comparison to approximately 21 percent during fiscal year 2003.

The agency is moving forward with plans to bring the supervisory level up to 1,726 by the end of fiscal year 2004.

#### CONTRACT TOWERS

*Question.* The subcommittee supports the FAA contract tower program as a way to provide cost-effective ATC services in a proven and safe manner at over 200 smaller airports across the country. Without this program, many of these smaller communities would lose the significant safety benefits a tower provides. Can you tell us the plans to spend the \$80.3 million provided by Congress in fiscal year 2004 for the baseline program and your projections for funding the program in fiscal year 2005?

*Answer.* In fiscal year 2004, the FAA will maintain 219 contract towers and provide funding for 10 new starts. For fiscal year 2005, \$79.2 million is included in the President's budget request to run contract towers.

#### BALANCING INVESTMENTS

*Question.* FAA modernization plans have suffered from a number of redirections over the past several years. The U.S. aerospace industry continues to make early investments in the technologies supporting these plans with returns on these investments delayed or eliminated when the FAA's plans change. What is the FAA doing

to ensure that future modernization plans are clearly defined, achievable, and supported by the aviation community?

Answer. Modernization efforts with links to avionics investments are heavily dependent on high levels of equipage to achieve customer benefits. When the benefits are overwhelming, such as with domestic reduced vertical separation minima (DRVSM), a rule can be made and a date certain for implementation set. When the modernization effort depends on voluntary equipage, the economic ability for a predominate portion of the fleet to equip to achieve additional flight efficiencies or economies is a major factor in achieving the modernization benefit. Since investments that include voluntary equipage are more uncertain, the FAA continually works with the aviation community through its Federal advisory committees (in particular, RTCA) to coordinate FAA and community investments, and to identify initial applications and target locations for which the benefit is overwhelming and the investment clear.

*Question.* As the airline industry and the economy recover from the September 11 terrorist attacks, airspace and airport capacity will once again become a significant concern. While it's reasonable to expect that some of the recent and pending system improvements will support the demand for the next couple of years, more significant technology insertion will be needed to ensure unconstrained aviation growth for the future. Near term spending on key technologies like LAAS, CPDLC, and ADS-B appears insufficient to ensure these technologies will be ready to deploy when they're needed. How are you balancing your investments between near-term, mid-term, and long-term modernization initiatives?

Answer. Balancing near-term, mid-term and long-term modernization initiatives is based on providing services that have the greatest value for our customers according to schedules that are mutually compatible. As an example, the Operational Evolution Plan includes modernization investments that produce significant value for our customers over the next several years.

Longer-term investments will provide a higher capacity, flexible infrastructure to accommodate new operational concepts that will be needed to meet future traffic growth. In many cases, longer-term services may require significant development before new concepts and systems can be implemented.

In today's business environment, aircraft equipage schedules have been delayed or canceled due to the number of cash-limited airlines. Also, practical limits exist in the rate and number of major changes that can be accommodated in operational facilities.

Finally, modernization investments need to be balanced against investments needed to safely and reliably provide existing services.

All of these factors are considered in consultation with our customers as our investments are balanced and reflected in the National Airspace System Architecture and our Capital Investment Plan.

#### HARMONIZATION OF U.S. AND EUROPEAN MODERNIZATION PLANS

*Question.* The United States has long been regarded as the global leader in aviation. Close cooperation between U.S. industry and the FAA has resulted in the aircraft and ATC technologies that shaped the first century of flight. In recent years, Europe has focused their efforts to modernize their aviation infrastructure. Projects like Galileo and the Single European Sky are positioning Europe to define the technologies that will shape the next century. What steps are you taking to harmonize U.S. and European modernization plans, ensuring U.S. interests are appropriately represented in future aviation solutions?

Answer. FAA continues to engage in bilateral, regional, and multilateral support activities to promote the improvement of safety worldwide, including the implementation of U.S. safety technologies, system safety concepts, and air traffic management procedures and practices as the foundation for global aviation safety standards. FAA international leadership is one of the four main goals included in the FAA Flight Plan for 2004-2008, and as such, will continue to be a top FAA priority.

FAA accomplishes this mainly through its participation in, and support of the International Civil Aviation Organization (ICAO) and its numerous technical panels, regional implementation groups, and higher-level policy meetings. Within these activities, FAA works very diligently to develop and obtain approval of global standards and recommended practices (SARPs), and guidance materials based primarily on U.S. systems and solutions to ensure that new globally adopted procedures and technologies will not be detrimental to the collective interests of the U.S. civil and military government, industry, and user communities.

Within the global aviation community, the United States and Europe, from the service provider perspective, are viewed as the two major air navigation service pro-

viders in the world that can ultimately determine the success or ineffectiveness of new technology, procedures and air traffic concepts. As such, cooperation between the FAA and its European counterparts has been viewed as imperative to the creation of truly seamless air transportation system. The FAA and EUROCONTROL have been cooperating for years through a Memorandum of Cooperation (MOC) and related technical annex agreements that outline our joint cooperation on air traffic management (ATM) research on new technologies and concepts, strategic ATM system analysis, harmonization of ATM enhancement programs and plans, ATM development and operation, and safety management and regulation. Between our respective support to ICAO global programs and our bilateral cooperative projects under the stated MOC, the FAA and EUROCONTROL continue to successfully harmonize and align related programs, to the extent practicable to ensure interoperability of air transportation systems and procedures between the United States, Europe, and neighboring airspace.

Through our ongoing cooperative relationships with the EUROCONTROL and European States, FAA is keeping abreast of the new Single European Sky Initiative (SESI) to be able to assess any aspects of the program that may be detrimental to United States policies or initiatives.

One of the most visible areas of U.S. and European cooperation is in satellite navigation system implementation. Since the release in 1996 of the United States Presidential Decision Directive (PDD) promoting the proliferation and use of the U.S. GPS and its civil wide and local area augmentations, the FAA has been encouraging its international counterparts, as individual States and as regional communities, to approve the use of the basic GPS signal for use in certain oceanic, en route, and non-precision approach operations. As a result, we have seen the number of States approving the operational use of GPS double since 1998.

For the last couple of years, the FAA has supported the U.S. Department of State's ongoing negotiations with the European Commission (EC) on overall operating principles of the planned European Galileo satellite constellation and its full interoperability with the already established and globally accepted U.S. GPS. As a result of this U.S. initiative, a joint statement was signed on February 25, 2004 between the EC and the United States stating that both parties were able to reach agreement on most of the overall principles of GPS/Galileo cooperation, and both parties will continue to work diligently to resolve the few remaining outstanding issues which concern primarily some legal and procedural aspects. This cooperation should minimize the negative implications to United States GPS interests worldwide (civil government, military, industry, and user community) as a result of the potential future implementation of the European Galileo satellite system.

On a more technical level, FAA has been managing a satellite based augmentation system (SBAS) technical interoperability working group since 1996 with participation by Europe and Japan to collectively ensure that technical interoperability issues are solved prior to the operational implementation of the United States (WAAS), European (EGNOS), or Japanese (MSAS) systems. FAA is also providing support to regional projects in South America and Southeast Asia to implement GPS augmentation system prototype capabilities. Successful results from these projects will influence the adoption of U.S. GPS and augmentation systems that will ultimately increase international flight safety for the U.S. aviation community.

#### GLASS BEADS

*Question.* On March 6, 2001, the Engineering and Specifications Division, FAA, requested the Office of Aviation Research to analyze glass beads "to determine if the new Visibead or Megalux bead are a viable alternative to the 1.9 or 1.5 IOR glass beads." (Project Number 2000-589.) The FAA issued a Final Report in early 2003 that found the Visibead and Megalux bead to be acceptable. Given the cost savings associated with the use of these glass beads, why has the FAA waited over 12 months to certify the use of these glass beads as required for airport managers/engineers to use Visibead and Megalux beads on airport runways?

*Answer.* The referenced study confirmed the acceptability of existing reflective glass beads and the newer Visibead and Megalux reflective glass beads, as well as newer formulations of water-borne paints. A draft change to the FAA paint specification has been initiated. In the meantime, an airport may ask for FAA approval on a project basis. The revised specification will contain generic language that both manufacturers of the newer glass beads can meet along with paint application rates specific to these newer beads. With the addition of these beads, three reflective media options will be available to an airport. In order of increasing initial cost, they are:

1. Type I beads, commonly referred to as "highway-grade" beads.



2. Type IV beads, the nomenclature used to refer to the Visibead and Megalux beads.

3. Type III beads, commonly referred as "airport-grade" beads.

*Question.* Can you assure the subcommittee that the FAA will certify the use of these glass beads on airport runways before the end of the current fiscal year?

*Answer.* A new paint specification will be issued prior to the end of the fiscal year. It contains generic language that will allow contractors to use Visibead and Megalux reflective glass beads.

#### RELIABLE COST INFORMATION

*Question.* There has been much discussion about the transition to the air traffic organization and the need to get good, reliable cost information. It is my understanding, however, that this information is not available, and it will take some time to do so. How long will it take to get this information?

*Answer.* Since the FAA switched to the new Department of Transportation financial system (DELPHI) in November 2003, we have been working on reconciling and cleaning up the financial information for all organizations, including the ATO. In addition, we have been working to interface this new financial information into our Cost Accounting System (CAS). We plan to re-establish the CAS interface and begin producing cost reports with the first 8 months of fiscal year 2004 data in August 2004 and all fiscal year 2004 data in October 2004. We expect to get back to routine monthly CAS reporting in November 2004 with fiscal year 2005 data.

*Question.* What stands in your way?

*Answer.* This fiscal year, the FAA implemented new financial (DELPHI) and procurement (PRISM) systems. These systems were necessary for the FAA to address long-standing weaknesses in these areas. Improving these systems is the foundation on which we can implement a more business-like approach to running the agency. As with any major system changes, there were backlogs and interface problems that have taken several months to resolve. One of the interface problems we experienced is between DELPHI and the existing Cost Accounting System.

Our first priority was to ensure that DELPHI provides accurate and timely financial information. DELPHI data must be accurate for cost accounting data to be accurate. We dedicated significant resources to clearing up DELPHI and PRISM backlogs through June 2004. In July 2004, we changed our focus to cleaning up some remaining issues with DELPHI data in support of the clean audit effort and to improving financial and acquisition business processes.

Our second priority is to complete the DELPHI interface that supports the Cost Accounting System. We completed testing the interface in March 2004 and will complete the processing of the first 9 months of fiscal year 2004 cost accounting data in early September 2004. All fiscal year 2004 cost data will be processed by late October 2004. In fiscal year 2005, we plan to return to monthly processing of the cost accounting data. We also continue to improve our labor distribution reporting for our Air Traffic Organization.

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#### QUESTIONS SUBMITTED BY SENATOR SAM BROWNBACK

##### CENTER WEATHER SERVICE UNITS (CWSU)

*Question.* I understand you are in the process of modernizing the FAA's air traffic operations and that updating and improving the Center Weather Service Units (CWSU) is part of that plan. I see many positive things in this plan that will enhance safety such as improved training, standardization among units, and instituting 24-hour operations. However, some of my constituents who are members of the National Weather Service (NWS) Employees Organization are concerned that a portion of this plan would no longer require a CWSU meteorologist at each of the 21 Air Route Traffic Control Centers (ARTCC). Would this plan leave some air traffic controller and management personnel without immediate, on-site meteorologist assistance? If so, how would this impact safety?

*Answer.* There are several different configurations for restructuring the CWSU under consideration. The FAA and the NWS are collaborating to come up with a configuration and placement of personnel that will improve safety. Further, we intend to take full advantage of revolutionary improvements in communications technology that have been developed since the CWSUs were first put in place more than 25 years ago (1978).

We recognize the concept of "on-site meteorological assistance" as essential for the safe, efficient management of air traffic. Frankly, that is why the NTSB has also been concerned that weather support be available at TRACON facilities and airport

traffic control towers—as well as at the CWSUs—at all times when significant weather is forecast.

Partly in response to these NTSB recommendations, we intend to design a system where all FAA field facilities get on-site weather assistance on a 24-hour basis, 7 days a week. The foundation of modern weather services is electronic and automated, rather than human. We recognize the impossibility of putting a meteorologist into every field facility of the FAA: air route traffic control centers (ARTCC), TRACONS, ATCTs and flight watch facilities of the automated flight service stations.

Thus, I can assure you that the improvements that we are planning for the CWSU will not leave air traffic controller and management personnel without immediate, on-site meteorological assistance. As an example, the service they now receive from the on-site meteorologist will improve immediately by 50 percent simply by operating 24 hours a day, rather than the present two shifts a day. However, this does imply the assistance that all facilities receive (including the ARTCCs) will be electronic and automated. This design is not only economical, but will be a great improvement in services compared with current level of operations.

Of course we are planning several sites where human weather support is always available 24 hours a day in case human intervention or consulting on critical weather problems is needed. However, their support will cover a regional domain, rather than just meeting local needs. This is the most economical use of trained meteorologists. Further, the NWS has proposed to train and reward these forecasters consistent with their larger responsibilities.

We recognize the employees union of the NWS, the National Weather Service Employees Organization, is concerned about changes. The NWS is a full partner in these plans.

#### GENERAL AVIATION

*Question.* General aviation is very important to Kansas, given the presence of airplane manufacturers, avionics manufacturers, and the 6,000 pilots across the State. What steps are being taken to ensure that general aviation pilots have access to the latest technology?

Answer. The FAA has worked in partnership with the general aviation (GA) industry to promulgate standards and guidance material to ensure that GA pilots have access to the latest technology.

The FAA recently published Technical Standard Order (TSO) C-145 and C-146 for WAAS for the Global Positioning System (GPS). This TSO allows avionics companies, such as Garmin and Honeywell, to self-certify WAAS equipment for installation in the GA fleet.

The FAA's Wichita Aircraft Certification Office has recently approved several new technology projects for use in the GA fleet. Both projects are navigation equipment and flight deck weather display applications.

The FAA has also published guidance material in the form of an Advisory Circular (AC) that considerably simplifies the requirements for GPS equipment installation. Due to the wealth of experience gained by FAA and industry in installing GPS equipment, this AC removes many of the burdensome requirements formerly associated with a GPS installation. The FAA has worked with avionics companies to streamline installation requirements for many GA operators.

*Question.* For example, the President's budget calls for GPS landing systems nationwide—a move that would greatly improve the safety of flying in difficult weather conditions. With precision satellite signals now available, how is the implementation of this system progressing?

Answer. The FAA commissioned WAAS in 2003. The WAAS system provides greatly improved accuracy, integrity and continuity for aircraft during precision approach operations.

The FAA published TSO C-145 and C-146 as minimum design standards for WAAS avionics. The FAA evaluated the potential of the new GPS L5 signals and has approved a new WAAS acquisition program baseline that exploits these signals to improve the reliability of operations in the presence of interference and severe atmospheric conditions. It introduces a new Category I precision approach capability.

The FAA has also chartered the Required Navigation Performance (RNP) program. The program is a combined effort of Air Traffic, Flight Standards, and Aircraft Certification. The RNP program exploits the navigation capability of present aircraft to use precision approaches at many airports.

## QUESTIONS SUBMITTED BY SENATOR PATTY MURRAY

## ADVANCED TECHNOLOGIES AND OCEANIC PROCEDURES

*Question.* Ms. Blakey, the Inspector General's status report points out that the FAA's operating cost estimates for Advanced Technologies and Oceanic Procedures (ATOP) are almost 3 years old and that there are remaining challenges associated with controller and technician training and acceptance of the technology. Do you agree with the Inspector General's assessment of the cost and schedule of the ATOP program?

*Answer.* The Inspector General's status report points out that the FAA's operating cost estimates for ATOP are almost 3 years old and that there are remaining challenges associated with controller and technician training and acceptance of the technology. The FAA is currently revalidating its operating cost estimates. Both controllers and maintenance technicians have also been involved in numerous validation and testing activities, and have been deeply involved in the development and review of the vendor's training materials. ATOP training is ongoing and to this point has received positive feedback from the user community.

*Question.* What can you tell us about the comfort level of the controller workforce in using this system?

*Answer.* Controller and maintenance personnel were members of the ATOP evaluation team prior to contract award and have been heavily involved in the program for the last 4 years, from design to on-site operations. The site product teams have also been involved in numerous validation and testing activities.

The ATOP Build 1 system test program successfully used a systematic approach to evaluate the ATOP system under a range of simulated and live operational conditions that were representative of those found at the Oceanic facilities. System test was conducted through a semi-structured exercise that permitted field participants to perform typical and non-typical assessments and evaluations to determine the operational suitability of the ATOP system.

The field believes that the ATOP system is operationally suitable contingent on the resolution of the issues documented. All issues are tagged according to their specified completion timeframes (e.g., by Site Acceptance Test (SAT), Field Familiarization (FF), First Course Conduct (FCC), and Initial Operating Capability (IOC). The ATOP team continues to verify software fixes, conduct regression testing, and monitor system changes and the resulting impacts to operational suitability. Any issues that may emerge or re-emerge in subsequent testing or validation activities will be evaluated for their operational impact.

*Question.* As for training, have the training materials been fully developed and will you have to expedite the training process to meet the June deployment date in Oakland?

*Answer.* Training materials have been fully developed for both controllers and maintenance technicians. Both groups' personnel have been deeply involved in the development and review of all training materials. The first training course is now underway for maintenance technicians and has received positive feedback. ATOP went live in Oakland on June 30, 2004.

## REVENUE DIVERSION

*Question.* The Inspector General's office has put a spotlight on the issue of airport revenue diversion with your recent report on San Francisco International Airport and your current review of potential revenue diversion at Los Angeles International Airport. Mr. Mead's testimony suggests that the FAA is not exercising adequate oversight in this area. Ms. Blakey, what additional steps is the FAA taking to make sure that airport revenues are not being diverted to other activities?

*Answer.* Unlawful revenue diversion generally occurs when an airport sponsor, usually a city or county, overcharges its airport for services, thereby diverting revenue from airport use. Revenue diversion is more likely to be a problem at larger airports and at city- or county-owned airports rather than independent airport authorities.

FAA has a number of different ways to detect unlawful revenue diversion. First, the agency reviews the annual financial reports that all commercial use airports are required to file with the FAA as a result of the 1994 FAA Reauthorization Act. Second, we review the findings of audits of airport revenue under the Single Audit Act, and have issued new guidance to the field offices to ensure they correctly analyze those findings. Third, FAA receives complaints of revenue diversion filed by companies and individuals doing business with an airport. Fourth, when the Office of the Inspector General (OIG) reports audit findings of unlawful revenue diversion by an

airport operator, the agency investigates and requires corrective action to resolve the findings.

When we identify a potential unlawful revenue diversion, we contact the airport and require an explanation. When we conclude that airport revenue has been improperly used, we require the diverted revenue to be refunded to the airport with interest.

Recently, in coordination with the OIG, we have taken the additional steps of identifying airports at higher risk of revenue diversion and focusing spot checks on financial transactions at those airports.

#### BASELINE REVIEW OF WAAS AND STARS

*Question.* Ms. Blakey, last year, Chairman Shelby asked you to name the three modernization projects that were most important to the future of the aviation system. Two of the programs you named, STARS and WAAS, are being rebaselined. When can we expect to see the details of your request for STARS and WAAS?

*Answer.* STARS—FAA has modified its strategy for Terminal Automation Modernization into a three-phased approach, starting with the most critical Terminal Radar Approach Controls (TRACONs.) This approach breaks large, complex terminal modernization acquisitions into phases that mitigate Government, vendor, and deployment costs and risks. This three-phased acquisition approach allows FAA to select a “best value” system and pace the automation system replacements and upgrades to fit within the FAA’s capital investment program and meet critical National Airspace System requirements.

Terminal Automation Modernization was re-baselined on April 20, 2004. We have just recently provided the details for fiscal year 2005 to the subcommittees. In the re-baseline, Terminal Automation is requesting \$113.9 million for Facilities and Equipment in fiscal year 2005 for Phase 1 of the modernization program.

The terminal automation baseline, approved by the Joint Resource Council (JRC), is for the Full Production and Deployment to the remaining 31 of its 50 most critical Terminal locations (Phase 1). In accordance with Congressional direction, the option to Phase 1 (Chicago’s Common ARTS IIIE and the two Common ARTS IIEs) will only be implemented after the Department of Transportation (DOT) Inspector General (IG) reviews and validates the life cycle costs and performs other relevant analysis. Phases 2 and 3 will be priced and presented separately at JRCs in future years. For the follow-on phases, FAA is developing a business case considering STARS and all other viable terminal modernization alternatives and will provide comparative cost/benefit data to the DOT IG for their review before awarding a contract for Phase 2 or 3.

Since FAA is the acquisition lead for the joint DOT and DOD STARS program, in accordance with Title 31, USC 1535, the Economy Act of 1932, rebaselining the FAA portion of the STARS program directly affects deployment of STARS at DOD sites within the Continental United States (CONUS) and outside the CONUS. The goal of the agreement is to avoid Departmental duplications of independent acquisitions, life cycles, and system-unique training of air traffic controllers and technicians. A joint DOT and DOD platform avoids duplicate civil and military development and sustainment expenditures.

WAAS was re-baselined on May 3, 2004. We recently provided the details of the request for fiscal year 2005 to the subcommittees. In the re-baseline, WAAS is requesting \$100.03 million for Facilities and Equipment in fiscal year 2005.

*Question.* How, if any, have the plans and capabilities of these two systems changed from last year?

*Answer.* STARS—The Terminal Automation Modernization plan has changed to a multiple-phased approach, starting with the most critical TRACONs. This reflects the FAA’s changing processes and philosophies to demonstrate a consistent and continuous business approach. A key element of this approach breaks large, complex modernization acquisitions (i.e., STARS) into phases that mitigate Government, vendor, and deployment costs and risks. This three-phased acquisition approach allows the FAA to select a “best value” system and will also use mostly fixed-price arrangements as opposed to cost-plus contracts. The FAA Joint Resources Council approved STARS for full production and deployment to its 50 most critical terminal locations (Phase 1) on April 20, 2004.

The STARS national baseline continues to evolve to meet National Airspace System requirements. Additional functionalities have been added to incorporate site-specific local patches, NTSB and Homeland Security enhancements, mirror Common ARTS developments, and satisfy DOD requirements for their worldwide operation. For all follow on phases and systems (Common ARTS IIIE and STARS), additional

capabilities will be added for in later phases. Each phase will be priced and presented separately at future JRCs.

WAAS will provide full Category One precision approach capability when it is completed. It will do this by using the new capabilities of the GPS satellite constellation when they become available. WAAS is now providing a near Category One capability over most of the United States. WAAS will be incrementally improved between now and 2008 to add additional ground hardware and system software to provide this near Category One capability over the entire continental United States and Alaska at all times. When the modernized GPS provides sufficient numbers of new satellites with the L5 signal capability, WAAS ground receivers and system software will be modified to use it. WAAS will then provide full Category One capability.

#### THE NEW SEATAC TOWER

*Question.* Ms. Blakey, as you are aware, we are about to commission a brand new air traffic control tower at Seattle-Tacoma International Airport. Certain offices of the FAA are now maintaining that your agency located this tower in the wrong location. How was it that the FAA built a brand new air traffic control tower, but put it in a less-than-ideal location?

*Answer.* The Seattle Air Traffic Control Tower (ATCT) siting study was completed in April 1997. The final location and height recommendation was based on meeting the FAA's existing siting criteria standards. These include providing a clear and unobstructed view of all controlled aircraft movement surfaces, adequate depth perception and perspective, and minimum desired look down angle to provide a clear line of site to furthest operational areas. In addition, an analysis was performed to understand the impact of applying Terminal Instrument Approach Procedures (TERPS) that were current at the time to determine any impacts to the IFR capabilities of the airport. The potential impact created by the height of the new ATCT on Runway 16L during periods of poor weather (CAT II/III operations) was raised during the siting process. When the TERPS analysis indicated that the decision height (DH) for CAT I operations on runway 16L would be raised, a determination was made by the FAA that the criteria at the time allowed for CAT II/III operations with a CAT I Decision Height in excess of the standard.

The new ATCT was designed and sited at the preferred location at the lowest optimum height. After construction on the new ATCT was substantially complete (end of 2002), the FAA revised its procedures and no longer permitted CAT II/III operations when the landing minimums for CAT I approach have been raised.

Because the new ATCT was almost complete, we established a cross-organizational working group to determine mitigation strategies. The team has been working on developing strategies that will provide the safe operation of the CAT I approach procedures while meeting the planned capacity of the airport. These potential strategies include radar-monitored final approach aid, redirecting slower speed category aircraft, advanced avionics, policy changes, special procedures and improved radar surveillance systems. FAA is currently conducting modeling and analysis to evaluate the feasibility and determine the full impact of implementing the preferred mitigation strategy. The analysis was completed in June 2004. A report of the study's outcomes will be published in August.

*Question.* The Port of Seattle is still waiting to hear how the FAA plans to address this concern about the location of the tower. Is there any risk that the FAA's remedy for this situation could result in there being a diminished number of takeoffs or landings allowed by any types of aircraft at SeaTac International?

*Answer.* In August 2003, the FAA Northwest Mountain Regional Management Team chartered a cross-organizational regional working group to develop a proposal that mitigates the ATCT height, ensures an equivalent level of safety, and meets the planned capacity at SeaTac.

The working group evaluated eleven potential mitigation strategies and ranked them with regard to the potential of ensuring an equivalent level of safety, maintaining current and planned capacity at SeaTac, and the feasibility of effecting the strategy. The strategies include radar-monitored final approach aid, redirecting slower speed category aircraft, advanced avionics, policy changes, special procedures, and improved radar surveillance systems.

The FAA Flight Technologies and Procedures Division is conducting modeling and analysis to evaluate the feasibility and to determine the full impact of implementing the mitigation proposals. This analysis is expected to be completed this month, and should allow for implementation of a strategy well in advance of the September 2006 date when Runway 16L is scheduled to become an "all weather" runway.

## JOINT PLANNING AND DEVELOPMENT OFFICE

*Question.* I believe that the subcommittee is now prepared to approve your re-programming request to launch the Joint Planning and Development Office (JPDO). I support this initiative and the interagency efforts that are supposed to be brought together by DOD, NASA, the White House and the Departments of Commerce, Defense and Homeland Security. Are you at all concerned that you will not gain the level of cooperation from the other Federal agencies that you need in order for the JPDO to fulfill its mandate?

*Answer.* The subject of our Air Transportation System is no longer solely an FAA interest. All six members of the JPDO recognize the need for close cooperation in this area. We have formed the JPDO and have representatives and principals, from all six members actively engaged in JPDO activities and working to develop the first edition of the national plan. This year's plan will provide the foundation for the following years' plans. We are also developing an MOU that will further define responsibilities and resources necessary to make the JPDO successful.

*Question.* I understand your budget is allocating only \$5 million a year to this initiative. Do you think that level of funding will demonstrate a strong enough commitment on the part of the FAA to bring all of the other agencies to the table in a meaningful way to develop the next generation of our aviation infrastructure?

*Answer.* Basic financial support for the JPDO in fiscal year 2004 came from both FAA and NASA. The FAA contribution was \$4.4 million and NASA's was \$5.38 million. Other members of the office contributed employees and some contractors. The fiscal year 2005 FAA budget will allow the office to hire 3 FTE and expand our work to begin limited integration. The office will rely on NASA to support the needed research for the program. Several interested groups, including our own Executive Advisory Committee, have recommended that we rapidly expand our systems integration activity. We are now studying this recommendation. If we decide that it is necessary to move more quickly in the systems integration area, it will cause us to modify our request.

The FAA continues to strongly support the formulation of a national plan for the next generation air transportation system. The \$5 million is for the support of the JPDO office itself. The national plan will encompass significant resources throughout the participating organizations of the Department of Transportation (FAA), Defense, Homeland Security, Commerce, and NASA.

## TERMINATION OF LONG-TERM PROCUREMENT PROJECTS

*Question.* Ms. Blakey, when you look at the projects that you have shelved because of the need to cut \$400 million out of your procurement budget, they appear to be those projects that were scheduled for deployment in the more distant future. However, they also represent some of the most critical projects necessary for taking the technology of our air traffic control system to the next level. For example, your agency is pulling the plug on its so-called Data Link Communications System, where aircraft sends a stream of data to air traffic controllers so that all that information does not need to be communicated by voice. This subcommittee has made significant investments in your Free Flight initiative and, by your agency's own admission, the full deployment of data link is essential to getting the maximum utility out of your Free Flight initiative. Part of the rationale that you have given as to why we can set these projects aside is because the financially strapped airlines are not yet in a position to equip their aircraft with this most up-to-date equipment. Isn't it true, however, that the FAA has not customarily waited to modernize the system until the airlines are ready, willing and enthusiastic about deploying new equipment?

*Answer.* The FAA has always considered our partners in the airlines when making major investment decisions, particularly those that require reciprocal equipage on their part in order to achieve real operational improvements. When there is a commitment to equip on their part, the FAA has moved out smartly to invest in the ground infrastructure and procedure development side. A case in point is Domestic Reduced Vertical Separation Minimum (DRVSM). Alternatively, when an equipage commitment from the airlines is less firm, the FAA has adopted a rational "go slow" approach wherein the FAA has developed the technology and fielded it in a limited number of locations. In cases where the airlines need to defer investments, it is prudent for FAA to do the same. Two cases in point are Controller-Pilot Data Link Communications (CPDLC) and the Local Area Augmentation System (LAAS).

*Question.* Is not there a real risk that we will dramatically slow the advancements that we make in modernizing our air traffic control system if we wait and wait and wait until the airlines say that they are ready to make the investment?

Answer. Capital investments that do not achieve improvements in operational efficiency due to airline non-equipage simply increase the FAA's costs without improving performance. In business terms, there is no return on the investment. Such investments should be eliminated. On the other hand, investments that modernize our system, but do not require airline equipage (e.g., ERAM and Terminal Modernization) will continue because they will achieve operational efficiencies and performance.

#### RULEMAKING AUTHORITY

*Question.* Your agency has the authority to require safety improvements to aircraft when you believe that they are beneficial for safety and the most efficient use of the air space. Have you given up on using that tool to advance improvements in our aviation system?

Answer. The FAA has rulemaking authority. The FAA ranks each proposed rule in terms of its safety effect. The FAA then does a cost-benefit analysis to make sure the proposed rule is worth its cost, which is ultimately borne by the flying public.

A recent example of the FAA's use of rulemaking authority to require safety improvements to the aircraft is the insulation flammability rule which was issued on July 14, 2003, which is designed to reduce the flammability of aircraft insulation (and thereby prevent the spread of fire). This rule requires manufacturers of new airplanes that enter service after a phase-in period to equip them with insulation that passes improved flammability test and requires air carriers, operating under Part 121, to use insulation meeting the new flame propagation requirements when they replace insulation.

#### SECURITY AT THE AUBURN TRACON

*Question.* In the age of heightened security, it has become even more important that we make sure that our air traffic control facilities have sufficient security measures in place. It was reported a few weeks ago that the TRACON facility in Auburn, Washington that is about to be completed would not be provided security guards even though the FAA built a guardhouse at the facility. Ms. Blakey, can you explain to us why you decided to forego security at this particular air traffic facility in Auburn?

Answer. FAA considers a number of factors when determining security requirements for its facilities. These include employee population, physical size, and the criticality of the facility to the National Airspace System. When developing security requirements for an individual facility, these factors plus an evaluation of local area risk and geography are used.

When the Seattle Terminal Radar Approach Control (TRACON) facility was designed and built, guards were required by FAA policy. Since then, FAA has migrated away from using guards at this type of facility. The main reason is our analysis of the security risks to these facilities, as well as the maturing of other aspects of FAA's Facility Security Management Program. In short, FAA determined that sufficient safeguards exist at facilities of this type, making a guard force unnecessary. Existing security measures at the Seattle facility include an extensive camera system that monitors key areas, and a secure access system for the property and building. In addition, the facility meets the security-required setbacks and has security fencing.

The policy change that removed the requirement for guards was put into effect in August 2003. We now reserve guard use at TRACON facilities that are significantly larger than the Seattle TRACON.

Even though the national policy shifted, with designs completed and construction underway, it was prudent to continue with the planned security measures. The guardhouse will provide us with future flexibility without incurring additional cost. We will provide guard services if the TRACON meets the established criteria for such measures in the future.

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#### QUESTIONS SUBMITTED BY SENATOR HERB KOHL

##### LORAN

*Question.* In recent years, this subcommittee has provided nearly \$120 million to the FAA and the Coast Guard to modernize the LORAN infrastructure through an existing Memorandum of Agreement between the agencies and DOT that was last updated in 2003. This work continues to be one of my important priorities. Repeated technical and economic studies by government, academics, industry and others provide convincing evidence of the need for and benefits of LORAN as a cost-effective

national asset to back up satellite navigation technology. Numerous infrastructure safety and efficiency improvement projects have already been completed and many other projects necessary to complete the modernization effort are already underway. LORAN is United States technology that is among the most widely used radio navigation systems worldwide and, aside from satellite technology, it is the only other multi-modal navigation system available to meet our national transportation system safety and security objectives. Over the past several years, DOT has promised to formulate a policy dealing with the long-term future of LORAN. What is the status of such a policy?

*Answer.* The FAA, in conjunction with Coast Guard, academic, and industry team members, delivered a technical report to DOT on March 31, 2004. This report evaluated whether LORAN could satisfy the current non-precision approach (NPA), harbor entrance approach (HEA), and timing and frequency requirements, and its capability to mitigate the impact of GPS outage on GPS position, navigation, and time applications. Similarly, the Volpe National Transportation System Center delivered their independent LORAN Benefit/Cost analysis to DOT on the same date. The administration will make a policy decision on LORAN following review of these reports.

*Question.* What is the FAA doing to ensure the continuation of a modern and secure LORAN system?

*Answer.* The FAA has utilized the funding provided by the subcommittee to significantly modernize the LORAN system infrastructure. Working closely with the United States Coast Guard, the three aging tube transmitters have been replaced with modern, state-of-the-art solid state transmitters, new timing and frequency equipment has been installed, and each LORAN station has been supplied with three new cesium clocks. LORAN stations have also installed uninterruptible power supplies to preclude even momentary outages during power outages. The FAA has also conducted significant research in modern LORAN receiver technology and has developed prototypes for aviation and maritime users and for other potential markets. It should be noted that the administration does not support funding for LORAN in DOT. Funding for LORAN should be provided to the Coast Guard since it is primarily a maritime system.

#### FAA POLICY ON AIRSPACE VIOLATIONS

*Question.* On January 15, a pilot of a small Cherokee airplane took a 4-hour flight that took him through the approach path of Philadelphia International Airport, buzzed commercial airliners and the Philadelphia Naval Shipyard, and came within a quarter-mile of the cooling towers of the Limerick nuclear power plant. When the small plane finally landed, the pilot's blood alcohol level measured 0.15. While the pilot could face charges of risking a catastrophe and reckless endangerment, the incident also highlighted an important deficiency in the FAA's ability to deal with such situations. While air traffic controllers and supervisors followed required protocol, it's clear that the current system is lacking in terms of both prevention and enforcement of airspace violations. What is the FAA policy on dealing with airspace violations?

*Answer.* The FAA's policy is to administer enforcement action on airspace violations. The FAA takes seriously the willful violation of Federal Aviation regulations. The range of enforcement sanctions can include warning letters, fines or certificate action, such as revocation. In the case mentioned, the pilot's license was revoked within 7 days of the incident.

*Question.* What would the FAA need in order to develop a quicker response system, one that could account for any such airspace violations in the future?

*Answer.* Aircraft that are flying in Visual Flight Rules (VFR) mode are required to display a beacon code of "1200," however, aircraft flying outside of controlled airspace (i.e., outside the Philadelphia International Airport Class B), have no requirement for the pilot to talk to air traffic controllers or file a flight plan. This VFR mode allows pilots a great deal of freedom in operating their aircraft, while reducing the burden on the National Airspace System of identifying and talking to every aircraft. On a clear weather day, VFR aircraft can be counted in the hundreds, especially in large metropolitan areas of the country. It would be an overwhelming burden on air traffic controllers to identify and separate these aircraft from one another.

When the identity of an aircraft is known and the air traffic controller has the ability to talk to that aircraft, the pilot is given instructions to avoid a restricted area. When a violation has occurred, the pilot is advised of the error and instructed to call the appropriate FAA facility for a briefing and follow-up with the Flight



Standards District Office (FSDO), which can take place immediately or several hours after the incident.

In the January incident, air traffic controllers were able to observe the aircraft's target on the radar scope for a portion of its flight, but never communicated with the pilot; many attempts to contact the pilot on "Guard frequency 121.5" were unsuccessful. To prevent situations like this, it would be necessary to change the rules for flying in VFR conditions by requiring two-way communications with air traffic controllers, discrete beacon code assignment, and mandatory filing of flight plans. The NAS is not capable of handling these capabilities at this time.

*Question.* Would you agree that we should strengthen Federal law as it applies to airspace violations?

*Answer.* The FAA does not believe that any changes to Federal law are necessary to address airspace violations. The current sanctions that we have available, i.e., suspending or revoking pilot certificates and imposing civil penalties, have proven to be sufficient. The agency rarely sees reckless violations of the sort committed by the pilot in Philadelphia. That pilot's certificate was revoked on an emergency basis. In addition, he was charged with State criminal violations for his conduct.

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#### QUESTIONS SUBMITTED BY SENATOR RICHARD J. DURBIN

##### CHICAGO O'HARE INTERNATIONAL AIRPORT

*Question.* How do you expect to proceed on addressing aviation congestion and flight delays at Chicago O'Hare International Airport in addition to the temporary, voluntary flight reductions during peak hours? When will data on the flight reductions be available?

*Answer.* In Vision-100, Congress gave the FAA a number of new tools to use when demand exceeds capacity at an airport. Under Section 422, the FAA can schedule delay reduction meetings, under Section 423, we can engage in collaborative decision making.

United Airlines, Inc. (UAL) and American Airlines, Inc. (AAL), agreed to an order cutting peak hour operations by 7.5 percent—5 percent in March and 2.5 percent starting in June. The Department of Transportation and the FAA deferred convening a schedule-reduction meeting under Section 422, in order to allow the operational limits to take effect and assess the impact on congestion and delay. The orders currently expire on October 31, 2004.

To augment these reductions, on June 13, 2004, FAA adopted new air traffic procedures for use under certain runway combinations at O'Hare that increases capacity and efficiency, especially for departing flights, by several operations each hour when conditions permit. The FAA is currently monitoring the results of the recent changes in schedules and procedures. We will analyze the operation under various weather conditions over the coming weeks before determining whether additional action is required.

The total daily flight reduction as a result of the 7.5 percent reduction by UAL and AAL has been 91 total flights during the most congested hours of 12 noon until 8 p.m. Many of these flights have been shifted to other hours. These are all short-term methods, with the long-term goal of addressing congestion by gaining additional capacity at the airport and throughout the National Airspace System. This administration is committed to addressing aviation congestion in both the short and long term and working with the carriers and local authorities.

*Question.* Can you explain the time line, including the EIS, for the O'Hare modernization project?

*Answer.* The City of Chicago is proposing a substantial reconfiguration of O'Hare International Airport under an initiative called the O'Hare Modernization Program (OMP). The city submitted a draft Airport Layout Plan (ALP) depicting the OMP proposal to FAA in December 2002 and a Master Plan document in February 2004. FAA comments on the ALP were provided to the city in mid-2003. Based on those comments, the city presented a revised ALP to FAA in October 2003. The FAA is also reviewing the Master Plan and preparing an Environmental Impact Statement (EIS) regarding the OMP proposal. Ultimately, the FAA must issue a favorable EIS Record of Decision and subsequently approve the ALP before the City of Chicago can begin construction.

The ALP and Master Plan review are ongoing at this time, and the EIS process is underway. On April 15, 2004, the FAA issued a letter to the City of Chicago outlining FAA's projected EIS schedule. The projected schedule reflects availability of a Draft EIS in February 2005 and an EIS Record of Decision in September 2005.

The EIS schedule was developed after extensive coordination between the FAA, its EIS contractor, and all involved subcontractors. The FAA sees the projected EIS schedule as an aggressive but achievable schedule, with significant effort having been devoted to streamlining the EIS process while simultaneously assuring the thoroughness and integrity of the process. FAA's efforts in regard to process streamlining include the development of written agreements with other involved government agencies that will yield efficiencies in our collective effort to complete an environmental assessment of the OMP proposal.

The City of Chicago projects the commissioning of its first new runway approximately 30 months after receipt of FAA approval. Approximately 2 years thereafter, the city projects the commissioning of its second new runway as well as the extension of one of O'Hare's existing runways. In total, the city projects a 10-year time frame for full implementation of the OMP. Throughout this period, substantial FAA work will be required to support the numerous National Airspace System changes necessitated by the OMP. The FAA is currently engaged in planning work associated with these NAS changes so as to be prepared for implementing the changes should the OMP be approved.

#### CHICAGO MIDWAY AND O'HARE AIRPORTS

*Question.* I would like to ask you to look into two Chicago Airport System projects that were included in the fiscal year 2004 Omnibus Appropriations conference report (Transportation-Treasury title), at my request. First, \$4 million for various improvements at Midway Airport related to capacity expansion. And second \$1.5 million for CAT II/III instrumentation for Runway 27L and Runway 27R at O'Hare. It is my understanding that the FAA has not yet released funding. Please explain any outstanding issues within the FAA related to these projects and give me an estimate as to when the funding will be released?

*Answer.* Regarding the \$4 million for airport improvements at Midway, the airport originally desired to use the Airport Improvement Program discretionary funds to help finance expansion of passenger screening capacity in the terminal. Terminal work of this kind cannot be funded with discretionary funding. Working with the airport, FAA has identified other projects of high priority for the airport and FAA that can be financed with discretionary funds. We are in the process of increasing the airport's existing Letter of Intent by \$4 million to include these items. We expect to notify Congress of our intention to issue the grant for these funds within 30 calendar days following completion of all environmental documentation.

The upgrade of Runway 27L and Runway 27R at Chicago O'Hare is an on-going FAA project with \$4 million of fiscal year 2003 funding already obligated on the National Construction Contract to do the work. The FAA is currently conducting the environmental assessment and engineering design. The ILSs and ALSF-2s have been purchased. The \$1.5 million in fiscal year 2004 funding completes the estimated \$5.5 million project. FAA plans to obligate the remaining funds by October 2004 to start construction activities.

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#### QUESTIONS SUBMITTED TO THE OFFICE OF THE INSPECTOR GENERAL

##### QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

*Question.* What do you believe is the most significant safety concern facing FAA?

*Answer.* As air traffic operations increase and the demand for air travel rebounds, there are two safety indicators to watch—runway incursions (potential collisions on the ground) and operational errors (when air traffic controllers allow planes to come too close together in the air). Runway incursions and operational errors pose a significant safety risk. We have seen some progress on runway incursions, with the number of incidents decreasing in fiscal year 2003 and continuing to decline during the first 8 months of fiscal year 2004; however, the most serious runway incursions increased. In addition, operational errors increased in fiscal year 2003 with an average of three operational errors each day and one serious error (those rated as high risk) every 7 days. Although operational errors decreased marginally during the first 8 months of fiscal year 2004, they are still much too high.

In addition, while FAA and U.S. air carriers have maintained a remarkable safety record, a significant emerging issue for FAA will be to adjust its safety oversight to changing trends in the aviation industry. For example, in response to record-breaking monetary losses, major air carriers are making unprecedented changes, such as outsourcing more of their aircraft maintenance. While major air carriers outsourced 37 percent of their aircraft maintenance expense in 1996, the amount spent on outsourced maintenance increased to 50 percent in 2003.

Another trend FAA will need to monitor is the growth of low-cost and regional air carriers. While network air carriers have been losing money and restructuring their operations, low-cost air carriers have experienced phenomenal growth and have increased their market share of passengers from 17 to 22 percent. This trend is projected to continue with FAA forecasting that low-cost and regional air carriers will account for more than 50 percent of the passenger market share in 2015.

*Question.* What progress is the FAA making on addressing the long-standing problems in its procurement process? Has procurement authority that Congress gave the FAA improved or hindered the FAA's ability to deliver capital programs?

Answer. First, with respect to acquisition reform, Congress gave FAA two powerful tools in 1996 by granting relief from Federal personnel and procurement rules, both of which the agency believed were hindering its ability to modernize the National Airspace System. FAA has not taken full advantage of this flexibility. Our work shows procurement reform at FAA has produced mixed results. While contracts are awarded faster, there has been little bottom line impact on cost and schedule problems with major acquisitions. For example, last year we analyzed 20 major acquisitions and found that 14 of these projects experienced cost growth of over \$4.3 billion, which represents considerably more than 1 years' annual appropriation for modernizing the National Airspace System.

Administrator Blakey and her team are well aware of the problems with major acquisitions, such as entering into long-term cost plus contracts before requirements are understood, unreliable cost and schedule baselines, and poor contract management, that have led to significant cost growth and schedule slips. FAA now has a chief operating officer and is transitioning to a performance-based organization for air traffic, and plans to change how the agency procures new air traffic control equipment. The key will be follow-through.

*Question.* When and at what cost do you expect the FAA to have fully functional ATOP systems replace the obsolete technology in Anchorage, New York, and Oakland Centers?

Answer. FAA's schedule calls for completing the installation of the last ATOP facility, Anchorage, in March, 2006. FAA's cost estimate to develop and field ATOP is \$548 million (from the Facilities and Equipment Account) with an additional \$1.06 billion to maintain and operate the system over its useful life (which is paid for through the Operations Account).

ATOP is approaching a key milestone at the end of June 2004—completing site testing at Oakland. If FAA can successfully complete site tests, necessary training, and satisfy any last minute needs of Oakland users, agency officials believe that the program will probably move forward within its cost and schedule goals and deploy ATOP as planned to New York (March 2005) and Anchorage (March 2006). However, if Oakland experiences significant delays to the current schedule, or unforeseen defects are uncovered, the entire ATOP program will be vulnerable to additional cost growth and schedule delays.

*Question.* It seems as if the STARS procurement is through the most difficult phase of the procurement cycle and your testimony indicates that the anticipated resources for this program will decline in the coming years.

How do you compare the relative risk remaining in the program compared to other major FAA programs such as WAAS, ASR-11, or ERAM?

Answer. Unfortunately, STARS is not past the point where procurement no longer presents difficult issues, and it is unclear what budgetary resources FAA will need to finish terminal modernization. Questions continue to persist about how much STARS will cost to complete and what capability it will actually provide. As described below, all four of these programs contain significant risk with respect to cost, schedule, and performance.

FAA has changed its terminal modernization strategy significantly. As a result, the cost assumptions that drove STARS are no longer valid. For example, the STARS 1996 baseline estimated a cost of \$940 million for 172 sites with a completion date of 2005. Due to cost and schedule concerns, FAA recently limited approval to 50 sites at a cost of \$1.45 billion. However, the total cost and timeframe for completing the entire terminal modernization program remains uncertain. Beyond 50 sites, FAA estimates STARS funding (assuming a full STARS solution) will peak at \$270 million in 2008. This funding estimate is only a placeholder until FAA decides in 2005 how it will complete terminal modernization and how much it will cost overall.

WAAS, like STARS, has experienced considerable cost growth and schedule slips and was pursued under a cost-plus contract. FAA believes much of the developmental risk is behind WAAS but, unlike STARS, airspace users must equip with new avionics to obtain benefits. Now, the risks for WAAS focus on (1) effectively managing a contract for obtaining geostationary satellites (to broadcast the WAAS

signal), (2) how quickly airspace users will equip with WAAS avionics, and (3) developing and publishing procedures for pilots to use WAAS approaches to airports.

Since we testified before the subcommittee, we learned that FAA intends to pursue Category I performance for WAAS in the 2007 timeframe to take advantage of the Department of Defense's plan to modernize the GPS constellation (with a second civil frequency). This presents a number of issues that must be resolved. For example, there is a great deal of uncertainty about how quickly the Department of Defense will modernize GPS and what will happen with the Local Area Augmentation System (a precision landing system for Category I, II, and III that recently slipped back into development). Unresolved issues also focus on concerns about user equipment and procedure development. As a result, consideration should be given to withholding funds for the pursuit of Category I until these issues have been resolved.

In comparison to STARS, the ASR-11 program faces lower performance and cost risks. This is because the ASR-11 needs little additional development work to deploy to its remaining sites. However, the program does face cost risks in two areas. Because development was delayed, procurements have been pushed into the future. This has caused prior cost estimates to grow. Also, the contract, which is administered by the Department of Defense, will expire before FAA will finish procuring all of the needed sites. If the Department of Defense terminates the contract or does not extend the production timeframe, FAA will not have a contract in place to complete the program. In either case, new, and probably higher, costs will have to be negotiated with Raytheon.

At this time, it is difficult to compare the relative risks of STARS to the \$2.1 billion ERAM effort because it is too early to determine if FAA can manage ERAM risks. In contrast to STARS, which has been underway for 8 years, ERAM is just getting started, and major design and development issues are not settled. FAA is less than 18 months into an ERAM program that will span over 7 years. FAA plans to rely on a phased approach to deliver hardware and software with reduced risk. Cost control will be essential because ERAM is being purchased through a cost-plus contract but the contract (currently worth \$1.2 billion) is not fully definitized. We plan to issue a report on ERAM this year.

*Question.* Do you believe that FAA is prepared to address a potential retirement surge of air traffic controllers in 2007?

*Answer.* FAA is just beginning to address a likely surge in controller retirements over the next several years. In our opinion, there are three key issues the Agency needs to focus on in order to effectively address the expected increases in attrition. Those are:

- developing better attrition estimates by location;
- assessing newly hired controllers' abilities before they are placed at facilities; and
- determining ways to reduce the time and costs associated with controller on-the-job training while still achieving results.

FAA has agreed with the recommendations in our June 2004 report and is taking steps to address them; the key now will be follow-through. An important milestone is December 2004 when FAA plans to release a detailed human capital plan for addressing controller retirements as required under FAA's Reauthorization—Vision—100.

*Question.* The subcommittee remains concerned over the use of air traffic controllers acting as controllers-in-charge and the rising number of operational errors under their watch. Mr. Mead, you testified last year that there is a statistical correlation between operational errors and the controller-in-charge program.

What conclusions can you draw from the data a year later?

*Answer.* Since we testified in 2003, the number of operational errors that occurred while a controller-in-charge (CIC) was supervising an area has continued to increase. In fiscal year 2003, operational errors that occurred while a CIC was supervising an area increased 43 percent to 248 from about 174 in fiscal year 2002. Further, during the first 8 months of fiscal year 2004, preliminary data indicates that operational errors that occurred while a CIC was supervising an area increased slightly to 161 compared to 155 during the same period in fiscal year 2003. In our April 2003 report we recommended that FAA conduct detailed evaluations of those facilities that have significant increases in operational errors while CICs are on duty to determine the cause of the increases. FAA agreed with our recommendation and committed to conduct detailed reviews of operational errors to identify causal factors. This analysis will include monitoring the impact the expanded CIC program has on operational errors. FAA stated that if the CIC actions result in an operational error, steps will be taken to ensure that only qualified controllers are performing CIC duties. We will continue to monitor this important matter.

## IS THE FAA'S OCEANIC PROGRAM IN TROUBLE?

*Question.* Mr. Mead, at the end of March, your office released a status report on your agency's ongoing review of the FAA's Advanced Technologies and Oceanic Procedures (ATOP) program. Your review uncovered serious software problems with ATOP and noted that the FAA may have shifted some of the risk of additional cost growth from the contractor to the government. This was one project where the FAA seemed to have had costs under control because they had a firm fixed contract.

Why in your view, did the FAA add \$11 million to this contract if the government had the contractor under a firm fixed contract?

*Answer.* Facing growing risks that ATOP would not meet its June schedule for starting operations at Oakland Center, FAA decided to add \$11 million to the fixed-price contract to meet ATOP's schedule. This allowed the contractor to focus additional resources to fix software development problems at the government's expense. The contractor had staff working on a later and more advanced software version of ATOP even though the first software version was experiencing problems. In essence, the modification allowed FAA to shift resources to help get the basic ATOP system to Oakland as planned.

*Question.* Mr. Mead, are you concerned that the FAA will continue to expose the government to higher costs in this program even though this project is under a firm fixed contract?

*Answer.* Although the increase of \$11 million is modest when compared to increases we have seen with other programs, we are concerned FAA has shifted the risk of additional cost growth from the contractor to the government. The critical issue is what happens with ATOP between now and February 2005. This timeframe is important because the recent contract modification limits the contractor's responsibility for paying to fix software problems FAA finds in ATOP after February 28, 2005. According to FAA, after work on the initial version of ATOP software (required for Oakland) is completed, the Agency will test the more advanced version at its Atlantic City Technical Center by the end of this year. After February 2005, FAA must pay to fix software problems that are found. Given the change in the contract and the tight timeframe, it will be critical for FAA to identify all software problems before that date.

*Question.* Given the problems to date, how confident are you that this program will continue to stay on schedule and within budget?

*Answer.* FAA built additional time into the ATOP schedule to handle unanticipated problems, but most of this schedule reserve was consumed resolving problems discovered during factory acceptance testing (completed in July 2003), which took much longer than anticipated. FAA is fast approaching another key program milestone for ATOP that will determine if it will stay on track. If ATOP can successfully pass site acceptance tests at Oakland in June 2004, FAA's ability to stay within schedule and budget will be strengthened.

*Question.* Mr. Mead, do you have any concerns that the FAA might rush to deploy the Oakland system before the FAA workforce is fully prepared to operate and maintain the system?

*Answer.* While we do not believe that FAA will deploy an air traffic control system to Oakland that the workforce could not safely operate and maintain, we are concerned that the ATOP program has become schedule driven. As we saw with STARS, as the pressure builds to meet the scheduled milestone, FAA might defer needed work just to stay on schedule. For example, FAA said it would install the nationally deployable version of STARS at Philadelphia in November 2002, but the agency made a number of trade-offs to meet the schedule. FAA estimates now show that 2 more years and \$59 million are needed to complete the development of a STARS system that can be deployed nationally. After FAA deploys ATOP to Oakland, and once the system is fully operational, the agency needs to communicate to the Congress and other key stakeholders any trade-offs or deferments made to maintain schedule.

## AIRPORT REVENUE DIVERSION

*Question.* Mr. Mead, your office has put a spotlight on the issue of airport revenue diversion with your recent report on San Francisco International Airport and your current review of potential revenue diversion at Los Angeles International Airport. Your testimony suggests that the FAA is not exercising adequate oversight in this area.

How rampant is the problem of airport revenue diversion?

*Answer.* The problem of airport revenue diversion has been extensive. Between 1991 and 2000, our audits disclosed over \$344 million in diverted revenue. The problem, however, has not subsided. Last year, we reported on revenue diversions at five

large airports, including one airport whose sponsor, a local government agency, diverted about \$40 million to other projects not related to the airport. We also just completed an audit at San Francisco International last month which disclosed about \$12 million in diverted revenue.

Our work shows that FAA's oversight of revenue diversions is limited. In the past, FAA has maintained that it did not have the resources to devote to this issue. We met with the Associate Administrator for Airports and members of her staff in May 2004 to discuss FAA's specific plans to increase the agency's oversight of revenue diversions. FAA is currently working on a plan that is designed to identify airports with the highest risk of diverting revenue. We recently provided the agency with our methodology for determining whether or not airport revenues have been diverted. We will continue to monitor this issue and work with FAA.

#### EXPLANATION FOR INCREASE IN OPERATIONAL ERRORS

*Question.* Mr. Mead, according to your testimony, in fiscal year 2003 the number of operational errors increased 12 percent.

To what extent do you believe this spike in operational errors is attributable to the vacant positions that the FAA has at many of its air traffic control facilities?

*Answer.* We have not performed work to determine if there is a correlation between air traffic control staffing and operational errors. However, it is important to note that although fairly accurate at the national level, FAA's staffing standards for each field location are not precise. The National Academy of Sciences reviewed FAA's staffing standards in 1997 and found that they cannot be used to provide highly accurate estimates of requirements for individual facilities. We have seen, however, indications that staffing workload can increase operational errors. Our analysis found that as air traffic operations decreased nationwide, operational errors decreased. Conversely, as operations increase nationwide, more opportunities existed for operational errors to occur.

*Question.* A small part of the pay raise that would be granted to air traffic controllers is dependent on a reduction in operational errors and yet operational errors have increased.

Mr. Mead, what are the reasons that you believe that operational errors have increased, and what is your assessment of FAA's efforts to reduce them?

*Answer.* As we noted in our April 2003 report there are a number of factors that contribute to the cause of operational errors and whether FAA is successful at reducing these incidents. Specifically, we found that (1) FAA needed to provide stronger national oversight of regions and facilities that were not making progress in reducing operational errors, (2) FAA procedures did not require training when controllers had multiple operational errors or for controllers who had errors that posed a moderate or high safety risk, and (3) FAA's expanded controller-in-charge program may have had a negative impact on operational errors. While FAA has made some progress in reducing these incidents during the first 8 months of fiscal year 2004, operational errors are still too high with three operational errors occurring each day and one severe error every 9 days.

In response to our report, FAA established a permanent national program manager for quality assurance responsible for the overseeing regional and facility efforts to reduce operational errors. Under FAA's new Air Traffic Organization structure, this manager (Director of Safety Evaluations) reports directly to FAA's Vice-President for Safety. This group plans to conduct 161 air traffic facility safety evaluations during fiscal year 2004, including no-notice reviews.

FAA also revised its training requirement so that controllers with multiple operational errors can be trained. However, FAA did not mandate that controllers who make operational errors that posed a moderate or high safety risk receive training. Finally, FAA agreed with our recommendation to monitor the impact of the CIC Program at the national level.

#### IS THERE ADEQUATE SECURITY AT THE AUBURN TRACON?

*Question.* In this age of heightened security, it has become even more important that we make sure that our air traffic control facilities have sufficient security measures in place. It was reported a few weeks ago that the TRACON facility in Auburn, Washington that is about to be completed will not be provided security guards even though the FAA built a guardhouse at the facility.

Mr. Mead, do you have any views on the overall security of the air traffic control facilities?

*Answer.* Security is important for all DOT personnel and equipment; this is especially true for critical facilities such as FAA air traffic control facilities. We are aware of reports that air traffic controllers moving into the new TRACON in Wash-

ington will not have armed security guards, because there will not be a sufficient number of employees at the facility to justify security guards based on FAA regulations. The new TRACON contains a guardhouse specifically built so two guards could monitor the 16 remote-controlled cameras and other security equipment. We plan to begin an audit this fall, which will assess FAA's Internal Security Program and whether FAA is ensuring adequate protection of FAA property, personnel, and operations against criminal and terrorist acts.

#### CONCLUSION OF HEARINGS

Senator SHELBY. I want to thank both of you on behalf of the subcommittee for the work you are putting in and we hope you are going to continue down that right road that you are going. Thank you.

The subcommittee is recessed.

[Whereupon, at 11:45 a.m., Thursday, April 22, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]